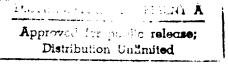AD-A250 514

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CREASE 6.0

Catalog of Resources for Education in Ada and Software Engineering

February 1992

Ada Information Clearinghouse
c/o IIT Research Institute
4600 Forbes Boulevard
Lanham, Maryland 20706
1-800-AdaIC-11

The AdaIC is sponsored by the Ada Joint Program Office.

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CATALOG OF RESOURCES FOR EDUCATION

IN Ada AND SOFTWARE ENGINEERING (CREASE)

Version 6.0

February 1992

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13. ABSTRACT (Maximum 200 words)

This Catalog of Resources in Ada and Software Engineering (CREASE) lists academic and commercial organizations that provide education and training in the Ada language and in software engineering concepts.

14. SUBJECT TERMS

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PREFACE

The Ada programming language is not a magic formula for improved applications programming. One of its major strengths is that it encourages sound software-engineering practices; its successful use requires an understanding and appreciation of software engineering. It is essential, therefore, that there be carefully planned education and training programs that teach fundamental software-engineering concepts and the effective use of the Ada language.

This publication is intended to serve as a source of information about resources available for:
      those who are planning such programs
      and those who wish to enroll in an Ada course.

It is hoped that this catalog will serve as a ready reference for Ada course offerings and also that it will increase awareness of the many aspects of education in Ada and software engineering.

TABLE OF CONTENTS

SECTION	PAGE NUMBER

SECTION 1
INTRODUCTION & SUMMARY RESULTS

1.1   INTRODUCTION

This Catalog of Resources in Ada and Software Engineering (CREASE) lists courses and seminars that provide education and training in the Ada language and in software-engineering concepts. The Ada Joint Program Office (AJPO) has developed the CREASE in order to report the availability of Ada-language educational resources within academic institutions; this catalog should not be construed as a recommendation or endorsement of any Ada resource by the AJPO or the Department of Defense.

1.1.1   Survey Methodology

To obtain information on current Ada courses, the Ada Information Clearinghouse (AdaIC) surveyed academic institutions and commercial technical training companies throughout the United States. The survey was mailed to more than 3,500 academic institutions; also, copies were distributed at various conferences. An electronic copy of the survey was placed on both the AdaIC Bulletin Board and the AJPO host computer (ajpo.sei.cmu.edu) on the Data Defense Network (DDN). Additionally, AdaIC staff made several hundred phone calls to follow up on the mailing.

Survey responses have been stored in a database that will be periodically updated. The process required editing of responses in order to comply with limitations of the tables and formatting requirements; every effort was made to preserve the content of each response.

1.1.2   Organization of CREASE version 6.0

This document is organized into two main sections, two indicies, and two appendices. They are as follows:

Section 1	Introduction & Summary Results
Section 2	Ada Course Offerings
Section 3	Index by Institution Name
Section 4	Index by Course Title
Appendix A	Ada Text Books
Appendix B	CREASE Questionnaire

The section listing Ada courses is organized alphabetically by state within the United States, and then by country. A listing of Ada textbooks and annotated abstracts for many Ada textbooks is provided in Appendix A. For more information on Ada-language textbooks, contact the AdaIC.

1.1.3   Updates to CREASE

The AdaIC will provide updates on the AJPO host on the DDN and on the AdaIC's electronic bulletin board (703/614-0215). The AJPO requests that institutions notify the AdaIC of course changes; this can be done either through U.S. mail (AdaIC c/o IIT Research Institute; 4600 Forbes Boulevard; Lanham, MD 20706-4320), or by sending electronic mail to adainfo@ajpo.sei.cmu.edu, or by leaving a message on the AdaIC Bulletin Board.

The AJPO appreciates your interest in and support of the Department of Defense's Ada program. Questions and comments should be referred to the AdaIC at 1-800-AdaIC-11 or 703/685-1477.

1.2   SUMMARY RESULTS

More than 650 responses were received from 576 different institutions. More than 500 responses were from four-year colleges and universities. The rest were from two-year colleges, technical schools, training companies, and Department of Defense (DoD) schools.

A comparison with the previous CREASE, Version 5.0 -- which was published in April 1988 -- indicates a continuing growth in Ada's presence in the academic community:

Number of schools offering Ada courses in Version 5.0:	186
Number of schools offering Ada courses in Version 6.0:	206
Number of classes in CREASE 5.0:	256
Number of classes in CREASE 6.0:	373

Of all respondents, the breakdown of the institutions by type is:

4-Year Institutions	571
2-Year Institutions	48
Technical Schools	14
DoD	5
Commercial Trainers	14

Of those schools that teach Ada courses, the breakdown by type is:

4-Year Institutions	170
2-Year Institutions	14
Technical Schools	7
DoD	2
Commercial Trainers	13

Of all institutions surveyed, 361 respondents (63%) teach no Ada courses; yet when asked if offered a free compiler, 457 (83%) said that they would consider teaching Ada. Only 91 institutions said they would not teach Ada. On a related question, if they were offered free computer-aided-instruction (CAI), 477 (87%) said they would, and only 72 said they would not.

Among the institutions that teach Ada, the largest number teach at least one course, but several institutions teach five or more.

Number of Ada courses	Respondents
0	361
1	124
2	47
3	10
4	4
5 or more	14

A number of questions were asked about the computer language requirements. An overwhelming majority listed Pascal as the primary undergraduate language. At the graduate level, FORTRAN was the language of choice for engineering majors, and C and Pascal were listed as languages for graduate programmers.

Primary Undergraduate Language (All Responses)

Pascal	298
C	39
Ada	27
COBOL	25
FORTRAN	8
BASIC	4
Other	17

Of the institutions that teach Ada courses, the responses yielded similar results. For the question regarding the primary undergraduate language, there were 140 responses. Of those, 123 require Pascal; 41 require the C languages (including C/C++); 36 require Ada; 15 require Modula2; 12 require COBOL; four require FORTRAN; and one requires an assembly language and BASIC.

For the question regarding the total undergraduate language requirements, there were 400 responses. Of that amount 130 were for Pascal, 95 were for the C languages (including C/C++), 69 were for Ada, 13 were for Modula2, 35 were for COBOL, 21 were for FORTRAN, and seven were for an assembly language. Other languages mentioned as being required: LISP, Icon, Prolog, Scheme, and PL1.

For the question requesting language requirements for undergraduate engineers, there were 237 responses. FORTRAN was the most required language (86), followed by Pascal (46), C (28), and Ada (7). Modula2, Icon, and assembly were also required; 59 responses said "Not Available".

There were 197 responses total for primary graduate languages. C had the most responses (52), then Pascal (28), and Ada (17). Other languages listed at least once were BASIC, COBOL, FORTRAN, Modula2, LISP, and Prolog; 87 responses said "Not Available".

The question regarding language requirements for graduates in computer science showed a narrowing of the gap between the numbers. Of 192 responses, C had 33, Pascal 25, Ada 21, and FORTRAN 5. Other languages mentioned at least once: COBOL, Modula2, and LISP; 103 respondents said "Not Available".

1.2.1   Hardware Requirements

An attempt was made to classify computer hardware requirements into three broad categories: mainframes, mini computers, and personal computers. The following general guidelines are given:

Mainframe

> A large, high-speed central processing unit containing a great deal of memory, and serving the largest number of users.

Minicomputer

> A digital computer, smaller than a mainframe, but capable of serving large numbers of users. May include work stations.

Personal Computer

> A computer that is smaller in size than either the mainframe or mini. Used by one person at a time.

Realistically, there is much overlapping among the three categories. Even so, the following lists are provided as a result of the category definitions.

Respondents reported using the following mainframes:

Brand Name	Model
Amdahl	
DEC VAX	
DEC VAX	BSD
DEC VAX II	785, 850
Encore	Multimax
IBM	370, 780, 3083, 3090, 4300, 4361, 4381, 4480, 4681, AS400
SUN	41470

Repondents reported using the following minicomputers:

Brand Name	Model
Altos	5000
AT&T	3B2/400, 3B2/1000, 3B4000, 3B15, Star
Apollo WorkStation	
DEC VAX	4000, 5500, 6000, 6310, 6500, 6510, 6800, 8250, 8350, 8450, 8460, 8530, 8600, 8650, 8700, 8800, 8810, 9600, 11750, 11780, VAX II-782, 785, VAX VI
Data General	MV7800, 10000, MV15000
Honeywell	DPS90
HP	720, 800, 835, 925, 1500, 3000, 9000

IBM	36, 3136, 4361, 4381, 4600, 9000, 9370, 9375, AS400
NEC	
Prime	650, 2755, 9055
SUN	280, 425, Sparc 1 & 2
Sequent	8000, Symmetry, S-27
Solborne	5/602

Personal computers are roughly categorized by type -- as either IBM or Apple architecture. Within each type there are subdivisons based on the processing chip. IBM compatibles are built by several different manufacturers. Macintosh is a product name of Apple Corporation.

Architecture	Chip Type	Manufacturer/Model
Amiga	3200	
AT&T	3B2	AT&T/400, 500, 700, 6300, 6386, 1000
Convex	C-120	
DEC		850, 3100, 3300, 3400, 3500, 3600, 3800, 3900, 5000, 5100, 5400
HP	Vectra	
IBM/Intel	286	IBM, clones
	386	IBM, Northgate, AST, AT&T, Compaq, Epson, Gateway, HP, Ipex, Unisys, Everex, Zenith, Tandy
	486	Dell, Silicon Valley IBM/3090, 3136, 4361, 4381, 4600, 6000
	PS/2	IBM/Model 20, 30, 50, 55, 70, 80
	RI 2000	IBM
	XT	
	AT	Mitsuba
Macintosh	Mac II	CI, SE 30, Plus CX
Next		
SUN		3/160, 4/175, Sparc I, Sparc II
	3	350, IPC

Other hardware, type unknown: Cyber 870

1.2.2 Current Ada Offerings

The questions of the survey and the number of responses are provided below. A copy of the questionnaire is provided in Appendix B.

1. **How many Ada courses does your institution offer?**

Number of courses	Number of responses	Percent
0	361	64
1	124	22
2	47	8
3	10	2
4	4	1
5 or more	14	3

2. **What is the primary undergraduate programming language?**

Language	Number of Responses	Percent
Ada	27	6
BASIC	4	1
C/C++	39	9
COBOL	25	6
FORTRAN	8	2
Pascal	298	71
Other	17	4

3. **Which of the following languages are degree requirements for undergraduate Computer Science majors?**

Language	Number of Responses	Percent
Ada	10	7
BASIC	2	1
C/C++	12	8
COBOL	4	3
FORTRAN	1	1
Pascal	105	76
Other	5	4

4. Which of the following languages are degree requirements for undergraduate Engineering majors?

Language	Number of Responses	Percent
Ada	2	1
BASIC	5	4
C/C++	6	4
COBOL	2	1
FORTRAN	94	68
Pascal	28	20
Other	1	1

5. What is the primary graduate programming language?

Language	Number of Responses	Percent
Ada	8	6
BASIC	1	1
C/C++	64	55
COBOL	4	3
FORTRAN	3	3
Pascal	35	30
Other	2	2

6. Which of the following languages are degree requirements for Master of Science in Computer Science candidates?

Language	Number of Responses	Percent
Ada	6	17
BASIC	0	0
C/C++	15	42
COBOL	2	6
FORTRAN	0	0
Pascal	12	33
Other	1	3

7. Is Ada used in any courses other than an Ada programming/syntax course?

YES	300
NO	232

8.   **Is an Ada course a degree requirement for any other degree?**

YES   15
NO   519

1.2.3   Potential for Teaching Ada

9.   **Would your institution teach Ada if you received an Ada compiler free of charge? (Some respondents added "Maybe".)**

YES   388
NO   91
MAYBE   69

10.   **What hardware would you prefer to use for the Ada compiler?**

PC   395
Minicomputer   213
Mainframe   82

11.   **Point of contact for free compilers and CAI.**

Information not provided in this report.

12.   **Would you use computer-aided instruction for teaching Ada if .. were provided free of charge? (Some respondents added "Maybe".)**

YES   424
NO   72
MAYBE   53

13.   **What hardware would you prefer to use for the computer-aided instruction program?**

PC   425   -
Minicomputer   210
Mainframe   77

14.   **What other training requirements do you have?**

Numerous responses.

15.   **Institution address.**

See individual entries in Section 3.

16.   **Which category best describes your institution?**

School Type   Number of Responses

4-Year College/University   571
2-Year College   48
Technical School   14
Other - Commercial   14
Other - DoD   5

University of Alabama—Tuscaloosa

Course Title: Programming Languages

Objective(s): Study programming languages concepts, organization, paradigms, design issues.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Strong Typing
Tasking		

Audience:

Computer Scientists

Compiler(s): IBM RS/6000 Ada compiler

Computer(s): IBM RS/6000; IBM PCs

Schedule: The class meets twice a week.

Prerequisites: Successfully completed another high-order programming course; Data Structures

Credit Hours: 3

Point of Contact: Allen Parrish, University of Alabama, P.O. Box 870290, Tuscaloosa, AL 35487, USA
phone: (205) 348-3749
e-mail: parrish@cs.va.edu

Auburn University

Course Title: Advanced Programming in Ada

Objective(s): Provide introduction to Ada with emphasis on advanced features, tasking, generics, data abstraction, information hiding, and software component libraries for large-scale development.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists   Engineers

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.
Ada Language Reference Manual

Compiler(s): Vax Ada with VMS; Verdix on the Sun

Computer(s): Vax; Sun Sparcstations

Schedule: The class meets 3 days a week for 10 weeks.

Prerequisites: Successfully completed another high-order programming course; upperclassmen

Credit Hours: 3

Point of Contact: Dr. T. M. Phillips, Auburn University, 107 Dunstan Hall, Auburn, AL 36849, USA
phone: (205) 844-6309

Birmingham Southern College

Course Title: Introduction to Computing/CS 170

Objective(s): Provide problem solving and algorithm development with introductory programming in Pascal or Ada.

Concepts:

Design Concepts   Problem Solving

Audience:

Beginning Students

Textbook(s): Varies

Compiler(s): Irvine Compiler Corp; Hewlett-Packard 9000 Ada compiler

Computer(s): IBM PS/2 50 and 55sx; Hewlett-Packard 9000 series 835

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Basic algebra

Credit Hours: 4

Point of Contact: Jerrel Baxter, Birmingham Southern College, P.O. Box A-24, Birmingham, AL 35254, USA
phone: (205) 226-3022
e-mail: uunet!bsc835!jbaxter

Southeastern Institute of Technology

Course Title: Ada Software

Objective(s): Provide a study of the Ada language and its use in large-scale and embedded software development.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists   Engineers

Textbook(s): Watt, D.A., et al. *Ada Language and Methodology*. Prentice-Hall, 1987.

Compiler(s): Meridian

Computer(s): IBM PC XT and AT

Schedule: The class meets twice a week for 8 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. Raymond C. Watson Jr., Southeastern Institute of Technology, P.O. Box 1485, Huntsville, AL 35807, USA
phone: (205) 837-9726

University of Southern Alabama

Course Title: Introduction to Programming Language—Ada

Objective(s): Teach syntax of the language and explore use of features especially with respect to object-oriented paradigm.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Analysts	Computer Scientists	Engineers

Compiler(s): Vax Ada - used as a Beta Test site. License no longer available.

Computer(s): PCs; IBM 386; System Zs; Sun; Vax; IBM Main; CRAY

Schedule: The class meets twice a week for 10 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 2

Point of Contact: Dr. M.J. Niccolai, Computer and Information Science Dept., University of Southern Alabama, 307 University Blvd. N., Mobile, AL 36688, USA
phone: (205) 460-6390
e-mail: f048@usouthal

University of Alaska—Anchorage

Course Title: Software Engineering/CS 401

Objective(s): Present the theory of software engineering and reinforce the theory through the experience of project development using Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Object-Oriented Design	Problem Solving	Software Engineering
Strong Typing		

Audience:

Analysts   Computer Scientists

Textbook(s): Volper, D. and Katz, M. D. *Introduction to Programming Using Ada.* Prentice-Hall, 1990.

Compiler(s): Vax Ada

Computer(s): Vax11-785

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Walt Briggs, University of Alaska, 3211 Providence Drive, Anchorage, AK 99508, USA
phone: (907) 786-4820

University of Alaska—Fairbanks

Course Title: Computer Science II/CS 202

Objective(s): Present the discipline of computer science including problem solving, algorithm development, structured programming, top-down design, good programming style, concurrent programming, and elementary data structures.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Shumate, K.C. *Understanding Ada: With Abstract Data Types*, 2nd ed. Wiley, 1989.

Compiler(s): Vax Ada; IBM RS6000

Computer(s): Hewlett-Packard; Vax workstations; PCs; IBM mainframe

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Peter J. Knoke, University of Alaska, Fairbanks, AK 99775, USA
phone: (907) 474-5107
e-mail: ffpjk@alaska.bitnet

Northern Arizona University

Course Title: Data Structure

Objective(s): Learn how to program with Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists   Engineers

Textbook(s): Ada as a Second Language

Compiler(s): Verdix

Computer(s): MicroVax

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; Junior-level course.

Credit Hours: 3

Point of Contact: Melvin Nevil, Northern Arizona University, Flagstaff, AZ 86001, USA
              phone: (602) 523-4613

Data Basix

Course Title: Current Topics in Computer Science

Objective(s): Familiarize the experienced programmer with all features of the Ada programming language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): MIL-STD-1815A

Compiler(s): DEC Vax

Computer(s): DEC Vax; compatibles

Schedule: The class meets once.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Ray Harwood, Data Basix, P.O. Box 18324, Tucson, AZ 85731, USA
phone: (602) 721-1988
e-mail: rharwood@east.pima.edu

University of Arkansas

Course Title: Ada for Software Design

Objective(s): Provide an advanced course in software engineering using Ada. The course includes a substantial team project that requires tasking.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Watt, D.A., et al. *Ada Language and Methodology*. Prentice-Hall, 1987.

Compiler(s): Telesoft; Meridian; Verdix

Computer(s): IBM PC and mainframe; Hewlett-Packard mini; Macintosh IIci; Sun Sparcstation

Schedule: The class meets 3 times a week for 16 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Greg Starling, Dept. of Computer Science, University of Arkansas, Fayetteville, AR 72701, USA
phone: (501) 575-6427
e-mail: starling@uafsysb.uark.edu

University of Arkansas

Course Title: Software Design and Development

Objective(s): Present a first course in the methods and resources for software engineering.

Concepts:

Abstract Data Types	Design Concepts	Generics
Management Overview	Package	Software Engineering
Strong Typing		

Audience:

Computer Scientists

Textbook(s): Pressman. *Software Engineering: A Practitioner's Approach*, 3rd ed. McGraw-Hill, 1991.

Compiler(s): Telesoft on IBM Mainframe; Meridian on Macintosh IIci; Verdix on Sun Sparcstation

Computer(s): IBM PC and mainframe; Hewlett-Packard mini; Macintosh IIci; Sun Sparcstation

Schedule: The class meets 3 times a week for 16 weeks.

Prerequisites: Successfully completed another high-order programming course; data structures

Credit Hours: 3

Point of Contact: Greg Starling, Dept. of Computer Science, University of Arkansas, Fayetteville, AR 72701, USA
phone: (501) 575-6427
e-mail: starling@uafsysb.uark.edu

Allan Hancock College

Course Title: Introduction to Programming/CS 151

Objective(s): Provide a beginning programming course for computer science Majors

Concepts:

Design Concepts	Problem Solving

Audience:

Computer Scientists

Computer(s): Hewlett-Packard 300; Macintosh IISI

Schedule: The class meets 3 times a week.

Prerequisites: Introduction to Programming with Assembly

Credit Hours: 3

Point of Contact: Suzanne Pawlan, Allan Hancock College, 800 South College Drive, Santa Maria, CA 93454, USA
phone: (805) 922-6966, ext 3545

California Polytechnic State University—San Luis Obispo

Course Title: Data Structures

Objective(s): Teach intermediate data structures.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Computer Scientists	Engineers

Textbook(s): Stubbes and Webre. *Data Structures.* 1993.
Ada Language Reference Manual

Compiler(s): Meridian Ada; Alsys Ada on AIX/370

Computer(s): IBM 3090; Sun 360; Macintosh PCs; Hewlett-Packard 9000/400

Schedule: The class meets 3 times a week.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Neil Webre, Dept. of Computer Science, California Polytechnic State University, San Luis
Obispo, CA 93407, USA
phone: (805) 756-1392
e-mail: nwebre@zeus.calpoly.edu

California Polytechnic State University—San Luis Obispo

Course Title: File Structures

Objective(s): Teach file structures.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Computer Scientists

Textbook(s): Miller, N.E. *File Structures: With Ada*. Benjamin-Cummings, 1989.

Compiler(s): Meridian Ada; Alsys Ada on AIX/370

Computer(s): IBM 3090; Hewlett-Packard 9000/400; Sun 360; Macintoshes

Schedule: The class meets 3 times a week.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Neil Webre, Dept. of Computer Science, California Polytechnic State University, San Luis
Obispo, CA 93407, USA
phone: (805) 756-1392
e-mail: nwebre@zeus.calpoly.edu

California Polytechnic State University—San Luis Obispo

Course Title: Fundamentals of Computer Science I

Objective(s): Provide a first course for computer science and computer engineering majors.

Concepts:

Design Concepts	Exception Handling	Generics
Package	Problem Solving	Software Engineering
Strong Typing		

Audience:

Computer Scientists   Engineers

Textbook(s): Skansholm, J. *Ada from the Beginning.* Addison-Wesley, 1988.
Ada Language Reference Manual

Compiler(s): Meridian Ada; Alsys Ada on AIX/370

Computer(s): IBM 3090; Hewlett-Packard 9000/400; Sun 360; Macintosh

Schedule: The class meets 3 times a week.

Prerequisites: None

Credit Hours: 7

Point of Contact: Neil Webre, Dept. of Computer Science, California Polytechnic State University, San Luis
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California Polytechnic State University—San Luis Obispo

Course Title: Fundamentals of Computer Science II

Objective(s): Provide a second course for computer science and computer engineering majors.

Concepts:

Design Concepts	Exception Handling	Generics
Package	Problem Solving	Software Engineering
Strong Typing		

Audience:

Computer Scientists   Engineers

Textbook(s): Skansholm, J. *Ada from the Beginning.* Addison-Wesley, 1988.
        Ada Language Reference Manual

Compiler(s): Meridian Ada; Alsys Ada on AIX/370

Computer(s): IBM 3090, Hewlett-Packard 9000/400; Sun 360; Macintosh

Schedule: The class meets 3 times a week.

Prerequisites: None

Credit Hours: 7

Point of Contact: Neil Webre, Dept. of Computer Science, California Polytechnic State University, San Luis
        Obispo, CA 93407, USA
        phone: (805) 756-1392
        e-mail: nwebre@zeus.calpoly.edu

California Polytechnic State University—San Luis Obispo

Course Title: Real-Time Programming

Objective(s): Teach real-time and parallel processing issues.

Concepts:

Object-Oriented Design	Real-Time Programming	Software Engineering
Tasking		

Audience:

Computer Scientists	Engineers

Compiler(s): Meridian Ada; Alsys Ada on AIX/370

Computer(s): IBM 3090; Hewlett-Packard 9000/400; Sun 360

Schedule: The class meets 3 times a week.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Neil Webre, Dept. of Computer Science, California Polytechnic State University, San Luis
Obispo, CA 93407, USA
phone: (805) 756-1392
e-mail: nwebre@zeus.calpoly.edu

California Polytechnic State University—San Luis Obispo

Course Title: Software Engineering I

Objective(s): Study full software engineering life cycle.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Software Engineering

Audience:

Computer Scientists   Engineers

Compiler(s): Meridian Ada; Alsys Ada on AIX/370

Computer(s): IBM 3090, Hewlett-Packard 9000/400; Sun 360; Macintosh

Schedule: The class meets 3 times a week.

Prerequisites: Successfully completed any other programming course

Credit Hours: 7

Point of Contact: Neil Webre, Dept. of Computer Science, California Polytechnic State University, San Luis
Obispo, CA 93407, USA
phone: (805) 756-1392
e-mail: nwebre@zeus.calpoly.edu

California Polytechnic State University—San Luis Obispo

Course Title: Software Engineering II

Objective(s): Study full software engineering life cycle.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Software Engineering

Audience:

Computer Scientists   Engineers

Compiler(s): Meridian Ada; Alsys Ada on AIX/370

Computer(s): IBM 3090; Hewlett-Packard 9000/400; Sun 360; Macintosh

Schedule: The class meets 3 times a week.

Prerequisites: Successfully completed any other programming course

Credit Hours: 7

Point of Contact: Neil Webre, Dept. of Computer Science, California Polytechnic State University, San Luis
Obispo, CA 93407, USA
phone: (805) 756-1392
e-mail: nwebre@zeus.calpoly.edu

California State Polytechnic University

Course Title: Introduction to Programming

Objective(s): Provide algorithm design, data structures and proper programming technique.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988.
Feldman, M. B. *Data Structures with Ada*. Prentice-Hall, 1985.
Ada Language Reference Manual

Compiler(s): Vax Ada; Meridian Ada

Computer(s): IBM PC; Vax 8000

Schedule: The class meets 3 times a week for 32 weeks.

Prerequisites: Math background

Credit Hours: 12

Point of Contact: Bruce Hillam, Computer Science, California Polytechnic University, 3801 W. Temple Avenue, Pomona, CA 91768-4034, USA
phone: (714) 869-3437

California State University—Bakersfield

Course Title: Ada Programming/CS 277

Objective(s): Learn how to write programs in Ada. Concept of package and generic, concept of modularity and data abstraction.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Strong Typing	Tasking

Audience:

Computer Scientists

Compiler(s): Vax Ada

Computer(s): Vax

Schedule: The class meets twice a week for 10 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. John Youssefi, Computer Science Dept., California State University, 9001 Stockdale Highway, Bakersfield, CA 93311-1099, USA
phone: (805) 664-3180
e-mail: youssef@calstate.bitnet

California State University—Dominguez Hills

Course Title: Ada Programming

Objective(s): Become familiar with the Ada Language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Tasking

Audience:

Computer Scientists

Compiler(s): Premium

Computer(s): Apollo

Schedule: The class meets 3 times a week for 16 weeks.

Prerequisites: Successfully completed another high-order programming course; Pascal

Credit Hours: 3

Point of Contact: Frank A Chimenti, California State University, Dominguez Hills, Carson, CA 90747, USA
phone: (213) 516-3398

California State University—Fullerton

Course Title: Data Structure

Objective(s): Provide an introductory course to data structures using Ada and Pascal.

Concepts:

Abstract Data Types	Design Concepts	Generics
Object-Oriented Design	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Waters and Katz. *Introduction To Ada.*

Compiler(s): None

Computer(s): Vax

Schedule: The class meets twice a week for 16 weeks.

Prerequisites: Introduction course

Credit Hours: 3

Point of Contact: Charles Mosmann, California State University, Fullerton, CA 92634, USA
phone: (714) 773-2011

California State University—Fullerton

Course Title: Workshop Ada

Objective(s): Provide a fast introduction to Ada for Pascal students.

Concepts:

      Abstract Data Types   Package   Tasking

Audience:

      Computer Scientists

Textbook(s): Waters and Katz. *Introduction to Ada.*

Compiler(s): Meridian

Computer(s): Vax

Schedule: The class meets once a week for 15 weeks.

Prerequisites: Successfully completed any other programming course; Pascal

Credit Hours: 1

Point of Contact: Charles Mosmann, California State University, Fullerton, CA 92634, USA
                phone: (714) 773-2011

California State University—Fullerton

Course Title: Workshop in Ada

Objective(s): Provide introduction to the Ada language

Concepts:

Abstract Data Types	Generics	Package
Tasking		

Audience:

Computer Scientists

Compiler(s): Meridian

Computer(s): Vax

Schedule: The class meets once a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 1

Point of Contact: Charles Mosmann, California State University, Fullerton, CA 92634, USA
phone: (714) 773-2011

California State University—Long Beach

Course Title: Data Structures with Ada

Objective(s): Teach data structures as abstract data types.

Concepts:

Abstract Data Types	Generics	Package
Strong Typing		

Audience:

Computer Scientists	Engineers

Textbook(s): Feldman, M. B. *Data Structures with Ada*. Prentice-Hall, 1985.

Prerequisites: Successfully completed any other programming course

Point of Contact: J. Carissmo, Computer Engineering and Science Dept., California State University, 1250 Bellflower Blvd, Long Beach, CA 90840, USA
phone: (213) 985-5522

California State University—Long Beach

Course Title: Programming and Problem Solving I

Objective(s): Teach introductory programming.

Concepts:

Abstract Data Types	Design Concepts	Problem Solving
Strong Typing		

Audience:

Computer Scientists   Engineers

Textbook(s): Volper, D. and Katz, M. D. *Introduction to Programming Using Ada.* Prentice-Hall, 1990.

Compiler(s): Meridian; DEC

Computer(s): PCs; Vax

Schedule: The class meets twice a week for 16 weeks.

Prerequisites: High school math

Credit Hours: 3

Point of Contact: J. Carissmo, Computer Engineering and Science Dept., California State University, 1250
Bellflower Blvd, Long Beach, CA 90840, USA
phone: (213) 985-5522

California State University—Long Beach

Course Title: Software Engineering

Objective(s):

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Real-Time Programming	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists   Engineers

Textbook(s): Varies

Prerequisites: Successfully completed another high-order programming course

Point of Contact: J. Carissmo, Computer Engineering and Science Dept., California State University, 1250 Bellflower Blvd, Long Beach, CA 90840, USA
phone: (213) 985-5522

California State University—Stanislaus

Course Title: Software Engineering

Objective(s): Provide introduction to techniques in software design, development, and verification. Team projects where students work on a large software project.

Concepts:

Design Concepts	Package	Software Engineering
Tasking		

Audience:

Computer Scientists

Textbook(s): Jones. *Software Engineering*. Wiley, 1990.

Compiler(s): Meridian Ada

Computer(s): IBM 80286/80386; Sun Sparc/Workstation

Schedule: The class meets 3 hours a week for 13 weeks.

Prerequisites: Five course prerequisites

Point of Contact: Edward L. Lamie, Computer Science Dept., California State University—Stanislaus, Turlock, CA 95380, USA
phone: (209) 667-3185
e-mail: lamie@altair.csustan.edu

Cuesta College

Course Title: Ada Programming

Objective(s): Teach the techniques of problem analysis and solution using the Ada programming language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Problem Solving	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988.

Compiler(s): OpenAda

Computer(s): 386 based PC Clones

Schedule: The class meets for 18 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: George Rumore, Cuesta College, P.O. Box 8106, San Luis Obispo, CA 93403-8106, USA
phone: (805) 546-3259

Monterey Peninsula College

Course Title: Ada Introduction

Objective(s): Provide essential data structuring concepts.

Concepts:

Abstract Data Types	Design Concepts	Package
Problem Solving	Strong Typing	

Audience:

2nd-year computer science students

Textbook(s): Shumate, K. *Understanding Ada*. HarperCollins, 1974.
Ada Language Reference Manual

Compiler(s): Meridian

Computer(s): PCs

Schedule: The class meets once a week for 16 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 2

Point of Contact: Dan Gregoria, Monterey Peninsula College, 10747 Country Meadows, Salinas, CA 93907, USA
phone: (408) 647-4499

National University

Course Title: Introduction to Ada

Objective(s): Prepare for software engineering.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*. 3rd ed. Addison-Wesley, 1989.

Compiler(s): Meridian

Computer(s): 386

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Diedre Pierson, National University, Sacramento, CA 95713, USA
phone: (619) 563-7143

National University

Course Title: Advanced Ada

Objective(s): A continuation from Introduction to Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Meridian

Computer(s): 386

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Diedre Pierson, National University, Sacramento, CA 95713, USA
phone: (619) 563-7143

Orange Coast College

Course Title: Introduction to Ada/CIS 114

Objective(s): Provide an introduction to Ada syntax and style of programming for software engineering.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Package	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Watt, D.A., et al. *Ada Language and Methodology.* Prentice-Hall, 1987.

Compiler(s): RR Software Janus V2.01

Computer(s): IBM 286 clones; IBM 386 clones

Schedule: The class meets for 18 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 4

Point of Contact: John R. Clark, Computer Science Dept., Orange Coast College, Costa Mesa, CA 92628-0120, USA
phone: (714) 432-5632

Orange Coast College

Course Title: Data Structures/CIS 200

Objective(s): Study data structures and algorithms

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Package	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Tennabum. *Data Structures*.

Compiler(s): RR Software Janus V2.01

Computer(s): IBM 286 clones; IBM 386 clones

Schedule: The class meets for 18 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 4

Point of Contact: John R. Clark, Computer Science Dept. Orange Coast College, Costa Mesa, CA 92628-0120, USA
phone: (714) 432-5632

Pepperdine University

***Course Title*:** Programming Languages

***Objective(s)*:** Provide a survey of important functional and imperative programming language concepts; emphasis in C, Ada, and Lisp.

***Concepts*:**

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Software Engineering
Strong Typing	Tasking	

***Audience*:**

Computer Scientists

***Textbook(s)*:** Appleby, et al. *Programming Languages*.

***Compiler(s)*:** NYU Ada Ed

***Computer(s)*:** PCs, Macintosh; Vax; Sun

***Schedule*:** The class meets 4 times a week.

***Prerequisites*:** Successfully completed another high-order programming course

***Credit Hours*:** 4

***Point of Contact*:** Don Thompson, Computer Science Dept., Pepperdine University, Malibu, CA 90263, USA
phone: (213) 456-4239
e-mail: thompson@pepvax bitnet

San Diego State University

Course Title: Programming Language Ada and Programming Style

Objective(s): Teach Ada concepts, programming in Ada and references to software engineering.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Gonzaler, D.W. *Ada Programming Handbook.*

Compiler(s): DEC Compiler

Computer(s): Vax—under VMS

Schedule: The class meets twice a week for 16 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: N. Marovac, Dept. of Math Sciences, San Diego State University, 5402 College Ave, San Diego, CA 92182, USA
phone: (619) 594-4345

University of the Pacific

Course Title: Programming Languages and Environments

Objective(s): Study VonNeumann Programming languages and their run-time implementations. Comparative study of the design of these languages.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Package
Problem Solving	Strong Typing	

Audience:

Computer Scientists	Engineers

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Tentative choice for Spring 1992: OpenAda (Meridian).

Computer(s): Sun 3/160; Vax/VMS; Macintosh II; IBM Clone (386/SX)

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: David Lundy, Computer Science Dept., University of the Pacific, Stockton, CA 95211, USA
phone: (209) 946-3014
e-mail: lundy@uop.uop.edu

Absolute Software Co., Inc.

Course Title: Ada-Based Design

Objective(s): Teach designers methods of improving system of software design by using Ada-based notations and design techniques and object-orientation. Also, teaches what is different about designing for Ada implementation and how to read Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Real-Time Programming	Software Engineering	Strong Typing
Tasking		

Audience:

Analysts	Computer Scientists	Engineers

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Booch. *Software Engineering with Ada*. Benjamin-Cummings.

Compiler(s): Project Compilers

Computer(s): Project Compilers

Schedule: The class meets for 1 week.

Prerequisites: None

Point of Contact: Edward Colbert, Absolute Software Co., Inc., 4593 Orchid Dr., Los Angeles, CA 90043-3320, USA
phone: (213) 293-0783
e-mail: colbert@markv.com

Absolute Software Co., Inc.

Course Title: Advanced Ada Programming

Objective(s): Provide effective implementation of a software design using Ada. Learn how Ada supports reuse and real-time, embedded systems development.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Real-Time Programming	Software Engineering
Tasking		

Audience:

Computer Scientists	Engineers

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Booch. *Software Engineering with Ada*. Benjamin-Cummings.

Compiler(s): Project Compiler

Computer(s): Project Compiler

Schedule: The class meets for 1 week.

Prerequisites: Introduction to Ada Programming

Point of Contact: Edward Colbert, Absolute Software Co., Inc., 4593 Orchid Dr., Los Angeles, CA 90043, USA
phone: (213) 293-0783
e-mail: colbert@markv.com

***

Course Title: Developing Reusable Ada Software

Schedule: The class meets for 3 days.

Prerequisites: None

Point of Contact: Edward Colbert, Absolute Software Co., Inc., 4593 Orchid Dr., Los Angeles, CA 90043, USA
phone: (213) 293-0783
e-mail: colbert@markv,com

Absolute Software Co., Inc.

Course Title: Introduction to Ada Programming

Objective(s): Provide effective implementation of a software design using Ada. Cover how Ada supports software engineering principles such as abstraction, information hiding and modularity and how to apply these principles.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Software Engineering
Strong Typing		

Audience:

Computer Scientists   Engineers

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Booch. *Software Engineering with Ada*. Benjamin-Cummings.

Compiler(s): Project Compilers

Computer(s): Project Compilers

Schedule: The class meets for 1 week.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Edward Colbert, Absolute Software Co., Inc., 4593 Orchid Dr., Los Angeles, CA 90043-3320, USA
phone: (213) 293-0783
e-mail: colbert@markv.com

Absolute Software Co., Inc.

Course Title: Managing Ada Projects

Objective(s): Introduce managers to using Ada on large-scale, mission-critical, and real-time systems, address issues of costs/benefits, reuse, risk management and Ada transition.

Concepts:

Management Overview   Object-Oriented Design

Audience:

Managers

Schedule: The class meets for 1 or 2 days.

Prerequisites: None

Point of Contact: Edward Colbert, Absolute Software Co., Inc., 4593 Orchid Dr., Los Angeles, CA 90043-3320, USA
phone: (213) 293-0783
e-mail: colbert@markv.com

Absolute Software Co., Inc.

Course Title: Object-Oriented Software Development Workshop

Objective(s): Provide in-depth experience and apply the Colbert object-oriented software development methods.

Concepts:

Design Concepts   Object-Oriented Design   Real-Time Programming
Software Engineering

Audience:

Analysts   Designers

Schedule: The class meets for 1 week.

Prerequisites: Object-oriented

Point of Contact: Edward Colbert, Absolute Software Co., Inc., 4593 Orchid Dr., Los Angeles, CA 90043-3320, USA
phone: (213) 293-0783
e-mail: colbert@markv.com

Absolute Software Co., Inc.

Course Title: Object-Oriented Software Development

Objective(s): Teach the goals, practices and principles of object-oriented software development. Teach object-oriented analysis and design using the Colbert object-oriented software development methods.

Concepts:

Design Concepts	Object-Oriented Design	Real-Time Programming
Software Engineering		

Audience:

Analysts	designers

Schedule: The class meets for 1 week.

Prerequisites: Experience and training in Ada

Point of Contact: Edward Colbert, Absolute Software Co., Inc., 4593 Orchid Dr., Los Angeles, CA 90043-3320, USA
phone: (213) 293-0783
e-mail: colbert@markv.com

AdaWorks

Course Title: Ada as a First Language

Objective(s): Provides a beginning course in Ada. No prior programming experience is expected or required.

Schedule: The class meets for one week.

Prerequisites: None

Point of Contact: Richard Riehle, AdaWorks, 261 Hamilton Ave., Suite 320E, Palo Alto, CA 94301
                   phone: (415) 328-1815

***

Course Title: Ada Decision

Objective(s): Provide information for executives to make informed decisions.

Schedule: The class meets once.

Prerequisites: None

Point of Contact: Richard Riehle, AdaWorks, 261 Hamilton Ave., Suite 320E, Palo Alto, CA 94301
                   phone: (415) 328-1815

***

Course Title: Ada For COBOL and MIS Programmers

Schedule: The class meets for 2 weeks.

Prerequisites: None

Point of Contact: Richard Riehle, AdaWorks, 261 Hamilton Ave., Suite 320E, Palo Alto, CA 94301
                   phone: (415) 328-1815

AdaWorks

Course Title: Ada Intensive For Software Engineer

Objective(s): Provide help for software engineers with programming problems.

Schedule: The class meets for two days.

Prerequisites: None

Point of Contact: Richard Riehle, AdaWorks, 261 Hamilton Ave., Suite 320E, Palo Alto, CA 94301
phone: (415) 328-1815

***

Course Title: Data Structures Using Ada

Objective(s):

Schedule: The class meets once.

Prerequisites: None

Point of Contact: Richard Riehle, AdaWorks, 261 Hamilton Ave., Suite 320E, Palo Alto, CA 94301
phone: (415) 328-1815

***

Course Title: Introduction to Ada Language For Programmers

Objective(s): Include the study of small practical assigned projects.

Schedule: The class meets for 2 weeks.

Prerequisites: None

Point of Contact: Richard Riehle, AdaWorks, 261 Hamilton Ave., Suite 320E, Palo Alto, CA 94301
phone: (415) 328-1815

AdaWorks

Course Title: Introduction To Ada Tasking

Objective(s): Provide tasking with advanced programming problems.

Prerequisites: None

Point of Contact: Richard Riehle, AdaWorks, 261 Hamilton Ave., Suite 320E, Palo Alto, CA 94301
phone: (415) 328-1815

***

Course Title: Learning Ada Through Project Experience

Objective(s): Have an AdaWorks trainer work side-by-side with project team to complete a fully operational
system in Ada.

Prerequisites: None

Point of Contact: Richard Riehle, AdaWorks, 261 Hamilton Ave., Suite 320E, Palo Alto, CA 94301
phone: (415) 328-1815

***

Course Title: Technical Briefing for Software Management

Schedule: The class meets for 3 days.

Prerequisites: None

Point of Contact: Richard Riehle, AdaWorks, 261 Hamilton Ave., Suite 320E, Palo Alto, CA 94301
phone: (415) 328-1815

Systems Engineering Research Corporation

Course Title: An Introduction to Ada

Objective(s): Provide a basic level of competence in understanding and using the Ada language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Analysts	Computer Scientists	Engineers
Managers		

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Bryan, D.L. and Mendal, G. *Exploring Ada*. (Volume 1). Prentice-Hall, 1990.

Compiler(s): None

Computer(s): None

Schedule: The class meets for 5 days.

Prerequisites: Successfully completed any other programming course

Point of Contact: Scott Cleveland, Systems Engineering Research Corp., 2348 Leghorn Street, Suite 202, Mountain View, CA 94043, USA
phone: (800) 232-7372
e-mail: well!sercmail@apple.com

Systems Engineering Research Corporation

Course Title: The Advanced Ada Topics Series

Objective(s): Bring students to a level of Ada expertise that is considered "guru" or "expert" level.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Analysts	Computer Scientists	Engineers

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.
Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Bryan, D.L. and Mendal, G. *Exploring Ada*. (Volume 1). Prentice-Hall, 1990.

Compiler(s): None

Computer(s): None

Schedule: The class meets for 5 days.

Prerequisites: Successfully completed any other programming course

Point of Contact: Scott Cleveland, Systems Engineering Research Corp., 2348 Leghorn Street, Suite 202,
Mountain View, CA 94043, USA
phone: (800) 232-7372
e-mail: well!sercmail@apple.com

TeleSoft

Course Title: Ada and DOD-STD-2167A

Objective(s): Instruct the student how to develop Ada software in the context of DoD-STD-2167A.

Schedule: The class meets for one day.

Prerequisites: None

Point of Contact: Serena Vackert, TeleSoft, 5959 Cornerstone Court West, San Diego, CA 92121, USA
phone: (619) 457-2700

•••

Course Title: Ada For Technical Managers

Objective(s): Present first and second level managers who want to know what is new and different about Ada but also need to know how the new features of Ada will affect software design and management.

Schedule: The class meets for 2 or 4 days.

Prerequisites: None

Point of Contact: Serena Vackert, TeleSoft, 5959 Cornerstone Court West, San Diego, CA 92121, USA
phone: (619) 457-2700

•••

Course Title: Design Methods with Ada

Objective(s): Cover Ada-oriented design methods in general, and layered virtual machine/object-oriented design will be especially emphasized.

Schedule: The class meets for two days.

Prerequisites: None

Point of Contact: Serena Vackert, TeleSoft, 5959 Cornerstone Court West, San Diego, CA 92121, USA
phone: (619) 457-2700

TeleSoft

Course Title: Distributed Real-Time Systems with Ada

Objective(s): Present distributed systems concepts and offer guidance on the use of Ada in a distributed real-time system.

Schedule: The class meets for 4 days.

Prerequisites: None

Point of Contact: Serena Vackert, TeleSoft, 5959 Cornerstone Court West, San Diego, CA 92121, USA
　　　　　　　　phone: (619) 457-2700

***

Course Title: Embedded Real-Time Systems with Ada

Objective(s): Present embedded systems concepts and offer guidance on the use of Ada in an embedded real-time system.

Schedule: The class meets for 4 days.

Prerequisites: None

Point of Contact: Serena Vackert, TeleSoft, 5959 Cornerstone Court West, San Diego, CA 92121, USA
　　　　　　　　phone: (619) 457-2700

***

Course Title: Performance Issues with Ada

Objective(s): Guide designers who already have a working knowledge of Ada, on methods that have been found to result in getting the best performance from Ada.

Schedule: The class meets for 3 days.

Prerequisites: None

Point of Contact: Serena Vackert, TeleSoft, 5959 Cornerstone Court West, San Diego, CA 92121, USA
　　　　　　　　phone: (619) 457-2700

TeleSoft

Course Title: Programmers Introduction to Ada

Objective(s): Teach how to program in the Ada language. The course provides a detailed tutorial of Ada languages.

Schedule: The class meets for 5 days.

Prerequisites: None

Point of Contact: Serena Vackert, TeleSoft, 5959 Cornerstone Court West, San Diego, CA 92121, USA
phone: (619) 457-2700

***

Course Title: Reusable Components With Ada

Objective(s): Provide guidelines for designing Ada components and a number of reusable low-level components are reviewed and evaluated in class.

Schedule: The class meets for 4 days.

Prerequisites: None

Point of Contact: Serena Vackert, TeleSoft, 5959 Cornerstone Court West, San Diego, CA 92121, USA
phone: (619) 457-2700

Aims Community College

Course Title: Programming in Ada

Objective(s): Teach language syntax and Ada concepts such as lexical style, overloading, package concepts, scope, visibility, binding and some data structures.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Strong Typing	Tasking	

Audience:

Computer Scientists   Engineers

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.
DOD Ada Manuals

Compiler(s): Hewlett-Packard 9000 Ada compiler

Computer(s): Hewlett-Packard 9000

Schedule: The class meets 5 times a week for 10 weeks.

Prerequisites: Pascal, data structures

Credit Hours: 5

Point of Contact: Sam Cooper, Aims Community College, P.O. Box 69, Greeley, CO 80632, USA
phone: (303) 330-8008, ext. 424

Pikes Peak Community College

Course Title: Ada Programming

Objective(s): Provide introduction to Ada; includes overload procedure, package concept, scope, visibility, building modes, varied records, and tasking.

Concepts:

Abstract Data Types   Design Concepts   Package
Tasking

Audience:

Programmers

Textbook(s): *Programming in Ada*

Compiler(s): Digital

Computer(s): Vax

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: James R. Walters, Pikes Peak Community College, 5675 South Academy Boulevard, Box 20, Colorado Springs, CO 80906, USA
phone: (719) 540-7267

Regis University—Colorado Springs

Course Title: Ada Programming

Prerequisites: None

Point of Contact: Kate Bemis, 2330 Robinson Street, Colorado Springs, CO 80904, USA
                    phone: (719) 634-3706

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Course Title: Advanced Ada

Prerequisites: None

Point of Contact: Kate Bemis, Regis University—Colorado Springs, 2330 Robinson Street, Colorado Springs,
                    CO 80904, USA
                    phone: (719) 634-3706

University of Colorado—Denver

Course Title: General Programming In Ada

Objective(s): Covers the Ada language and programming.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object—Oriented Design	Package
Problem Solving	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Verdix

Computer(s): Vax 8800

Schedule: The class meets twice a week for 16 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Alan Hunter, University of Colorado—Denver, 4200 E. 9th Ave. Box B-119, Denver, CO 80162, USA
phone: (303) 556-4313

University of Colorado—Denver

Course Title: Parallel Ada

Objective(s): Teach Ada parallel techniques

Concepts:

        Software Engineering   Tasking

Audience:

        Computer Scientists

Textbook(s): Ben-Ari. *Principles of Concurrent and Distributed Programming*. Prentice-Hall, 1990.

Compiler(s): Verdix

Computer(s): Vax 8800

Schedule: The class meets twice a week for 16 weeks.

Prerequisites: General Program

Credit Hours: 3

Point of Contact: Alan Hunter, University of Colorado—Denver, 4200 E. 9th Ave. Box B-119, Denver, CO
        80162, USA
        phone: (303) 556-4313

University of Southern Colorado

Course Title: Ada and Software Engineering

Objective(s): Teach software engineering to students

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): *Ada and Software Engineering.*

Compiler(s): Meridian Ada

Computer(s): 386

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Robert Cook, University of Southern Colorado, Pueblo, CO 81001, USA
phone: (719) 549-2752

Connecticut College

Course Title: Theory of Program Language

Objective(s): Study theoretical and comparative aspects of program language and paradigms.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Strong Typing

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Various Language Texts

Compiler(s): NYU Student Compiler

Computer(s): Macintosh II; Microvax 4000

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 4

Point of Contact: Stanley Wertheimer, Connecticut College, New London, CT 06320-4196, USA
phone: (203) 439-2026
e-mail: sjwer@conncoll

Central Connecticut State University

Course Title: Advanced Topics in Computer Science

Objective(s): Present Ada as a language that was designed to facilitate the incorporation of good software engineering principles during software development.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Vax Ada Compiler

Computer(s): Vax Terminals

Schedule: The class meets for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Anita Zoe Liebowitz, Central Connecticut State University, New Britain, CT 06050, USA
phone: (203) 827-7568
e-mail: leibowitz@ctsatcu.bitnet

Thames Valley State Technical College

Course Title: Ada Programming I

Objective(s): Teach students the newest concepts in high level languages, along with concurrent programming concepts.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Real-Time Programming	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Notes from Green Manual

Compiler(s): Vax

Computer(s): Vax; IBM

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: Aristedes K. Manthous, Thames Valley State Technical College, 574 New London Tpke., Norwich, CT 06360, USA
phone: (203) 886-0177

University of Delaware

Course Title: Programming Language Topics-Ada

Objective(s): Present Ada to the students and to get them to learn the basics in the programming of this language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Analysts	Computer Scientists	Juniors Seniors

Compiler(s): Verdix

Computer(s): Sun

Schedule: The class meets once a week for 14 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Larry Pethick, University of Delaware, 103 Smith Hall, Newark, DE 19716, USA
phone: (215) 648-2583

Gallaudet University

Course Title: Data Structures

Objective(s): Offer a standard third year computer science course. Covers stacks, queries, trees.

Concepts:

Abstract Data Types	Design Concepts	Object-Oriented Design
Package	Problem Solving	Software Engineering

Audience:

Computer Scientists   Students

Textbook(s): Feldman, M. B. *Data Structures with Ada.* Prentice-Hall, 1985.

Compiler(s): Vax-Mainframe

Schedule: The class meets 3 times a week for 18 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Howard Eghen, Gallaudet University, 800 Florida Ave, NE, Washington, DC 20002, USA
phone: (202) 651-5307
e-mail: hleghen

George Washington University

Course Title: Advanced Programming Languages

Objective(s): Provide a graduate course in comparative programming languages. Ada is studied in the context of its interesting features such as packages, exception-handling, and tasking. Programming projects require coding in several languages, of which Ada is one.

Concepts:

Abstract Data Types	Exception Handling	Package
Strong Typing		

Audience:

Computer Scientists	Engineers	interested

Textbook(s): Sebesta. *Concepts of Programming Languages*. Benjamin-Cummings, 1989, Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): The Irvine Compiler Corp. Hewlett-Packard-UX

Computer(s): Hewlett-Packard 9000-835

Schedule: The class meets once a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course; CSci 131

Credit Hours: 3

Point of Contact: Prof. Michael B. Feldman, George Washington University, 801 22nd Street NW, Washington, DC 20052, USA
phone: (202) 994-5253
e-mail: mfeldman@seas.gwu.edu

George Washington University

Course Title: Concurrency and Parallelism in Programming

Objective(s): Provide a study of comparative models of concurrency. The Ada tasking model is studied in depth, as are the concurrency of other models such as occam and Concurrency C. Programming assignments require coding in several languages, of which Ada is one.

Concepts:

Exception Handling	Package	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists	Engineers	interested

Textbook(s): Ben-Ari. *Principles of Concurrent and Distributed Programming*. Prentice-Hall, 1990.
Gehani, N. *Ada Concurrent Programming*, 2nd ed. Silicon Press, 1991.

Compiler(s): Hewlett-Packard UX, Verdix, Telesoft, and Meridian

Computer(s): Hewlett-Packard 9000-835

Schedule: The class meets once a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course; CSci 258

Credit Hours: 3

Point of Contact: Prof. Michael B. Feldman, George Washington University, 801 22nd Street NW, Washington, DC 20052, USA
phone: (202) 994-5253
e-mail: mfeldman@seas.gwu.edu

George Washington University

Course Title: Design of Translators

Objective(s): Design and implement compilers and other translators. Ada is the language of the textbook; an Ada subset is the language being translated. The concepts below are discussed in the context of techniques for translation.

Concepts:

Abstract Data Types	Exception Handling	Package
Software Engineering	Strong Typing	

Audience:

Computer Scientists	Engineers	interested

Textbook(s): Fischer and LeBlanc. *Crafting a Compiler*. Benjamin-Cummings, 1988.

Compiler(s): Hewlett-Packard UX; AFLEX; AYACC; LEX; and YACC

Computer(s): Hewlett-Packard 9000-835

Schedule: The class meets once a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course; CSci 232

Credit Hours: 3

Point of Contact: Prof. Michael B. Feldman, George Washington University, 801 22nd Street NW, Washington, DC 20052, USA
phone: (202) 994-5253
e-mail: mfeldman@seas.gwu.edu

George Washington University

Course Title: Intermediate Ada Programming

Objective(s): Offer a non-credit, 5-day continuing education seminar for students with some experience in the Ada languages. The course emphasizes a number of topics including numerics, variant records, tasking, and machine-dependent programming with special stress on

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Analysts	Computer Scientists	Engineers
interested		

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.
ANSI/MIL-STD-1815A

Compiler(s): Meridian OpenAda

Computer(s): DOS

Schedule: The class meets for 1 week.

Prerequisites: Experience with Ada

Point of Contact: Prof. Michael B. Feldman, George Washington University, 801 22nd Street NW, Washington, DC 20052, USA
phone: (202) 994-5253
e-mail: mfeldman@seas.gwu.edu

George Washington University

Course Title: Introduction to Ada Programming

Objective(s): Offer a 5-day seminar introducing the Ada programming language in a non-judgmental way. About half of time is "hands-on" programming workshops. Includes Ada9X revisions. Available as in-house for government and industry.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Software Engineering	Strong Typing
Tasking		

Audience:

Analysts	Computer Scientists	Engineers
Managers	interested	

Textbook(s): Cohen, N. C. *Ada as a Second Language.* McGraw-Hill, 1986.
ANSI/MIL-STD 1815A

Compiler(s): Meridian OpenAda

Computer(s): DOS

Schedule: The class meets for 1 week.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Prof. Michael B. Feldman, George Washington University, 801 22nd Street NW, Washington, DC 20052, USA
phone: (202) 994-5253
e-mail: mfeldman@seas.gwu.edu

George Washington University

Course Title: Programming and Data Structures

Objective(s): Provide a sophomore course emphasizing data structures, abstract data types, and algorithm performance. Ada is the language of the book, lectures, and programming projects.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Problem Solving	Software Engineering
Strong Typing		

Audience:

Computer Scientists	Engineers	interested

Textbook(s): Feldman. M. B. *Data Structures with Ada*. Prentice Hall, 1985.
Feldman, M. B. and Koffman, E. B. *Ada Problem Solving & Program Design*. Addison-Wesley, 1991.

Compiler(s): Irvine; Hewlett-Packard-UX; Meridian OpenAda/286

Computer(s): Hewlett-Packard 9000-835; Hewlett-Packard-UX; IBM PS2s

Schedule: The class meets twice a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Prof. Michael B. Feldman, George Washington University, 801 22nd Street NW, Washington, DC 20052, USA
phone: (202) 994-5253
e-mail: mfeldman@seas.gwu.edu

George Washington University

Course Title: Theory of Computer Translators

Objective(s): Design and implement compilers and other translators. Ada is the language of the textbook; an Ada subset is the language being translated. Concepts are discussed in context of techniques for translating them.

Concepts:

Abstract Data Types	Exception Handling	Package
Software Engineering	Strong Typing	

Audience:

Computer Scientists	Engineers

Textbook(s): Fischer and LeBlanc. *Crafting a Compiler*. Benjamin-Cummings, 1988.

Compiler(s): Irvine; Hewlett-Packard-UX

Computer(s): Hewlett-Packard 9000-835

Schedule: The class meets twice a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course; CSCI 142

Credit Hours: 3

Point of Contact: Prof. Michael B. Feldman, George Washington University, 801 22nd Street NW, Washington, DC 20052, USA
phone: (202) 994-5253
e-mail: mfeldman@seas.gwu.edu

Howard University

Course Title: Programming Languages

Objective(s): Offer an introduction of Ada as a tool for software engineering.

Concepts:

Abstract Data Types	Generics	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Analysts	Computer Scientists	Engineers

Compiler(s): Verdix Ada for Sun

Computer(s): Sun; Hewlett-Packard Workstations

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Don Coleman, Dept. of Engineering, Howard University, 2300-6th Street NW, Washington, DC 20059, USA
phone: (202) 806-6595
email: dmc@scs.howard.edu

Ada Technology Group, Inc.

Course Title: Ada Object-Oriented Design

Objective(s): Teach students to use Ada object-oriented methods, using real-time structured analysis, Ada POL, and reuse as the development paradigm. Provide hands-on exercise to reinforce concepts.

Concepts:

Abstract Data Types	Design Concepts	Generics
Object-Oriented Design	Package	Real-Time Programming
Software Engineering	Tasking	

Audience:

Analysts	Engineers	Managers

Textbook(s): None

Compiler(s): Meridian OpenAda

Computer(s): Compaq 386; IBM Compatibles

Schedule: The class meets for 1 week.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Ada Technology Group, Inc., 29 "N" St. N.W., Washington D.C. 20001
phone: (202) 387-2715

Ada Technology Group, Inc.

Course Title: Ada Real-Time Systems Design

Objective(s): Teach the students to use the concurrent features of Ada and present guidelines for effective use of real-time features to present design models and paradigms for embedded applications.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Object-Oriented Design	Package	Problem Solving
Real-Time Programming	Software Engineering	Strong Typing
Tasking		

Audience:

Analysts	Computer Scientists	Engineers

Compiler(s): Meridian OpenAda

Computer(s): Compaq 386; IBM Compatibles

Schedule: The class meets for 1 week.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Ada Technology Group, Inc., 29 "N" St. NW, Washington D.C. 20001
phone: (202) 387-2715

Ada Technology Group, Inc.

Course Title: Ada Software Engineering Design Method

Objective(s): Provide for the software designers, managers and system integration personnel who need to understand how Ada can best be used to design software and how to establish a coherent Ada-based methodology.

Schedule: The class meets for 1 week.

Prerequisites: None

Point of Contact: Ada Technology Group, Inc., 29 "N" St. NW, Washington D.C. 20001
phone: (202) 387-2715

***

Course Title: Ada Software Engineering for Development

Objective(s): Teach the students to use Ada effectively to understand concept of strong typing, packages and how the language supports software engineering.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Analysts	Computer Scientists	Engineers

Compiler(s): Meridian OpenAda

Computer(s): Compaq 386; IBM Compatibles

Schedule: The class meets for 1 week.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Ada Technology Group, Inc., 29 "N" St. NW, Washington D.C. 20001
phone: (202) 387-2715

Ada Technology Group, Inc.

Course Title: Ada Software For Managers

Objective(s): Evaluate Ada designs or understand the management issues that must be considered when Ada is to be used to develop software applications.

Audience:

Analysts	Computer Scientists	Engineers
Managers		

Schedule: The class meets for 3 days.

Prerequisites: None

Point of Contact: Ada Technology Group, Inc., 29 "N" St. NW, Washington D.C. 20001
phone: (202) 387-2715

Ada Technology Group, Inc.

Course Title: Ada Technology Issues

Objective(s): Educate management who need to know the advantages, risks, and costs that are involved when Ada is the language chosen for a software development project.

Schedule: The class meets for 3 days.

Prerequisites: None

Point of Contact: Ada Technology Group, Inc., 29 "N" St. NW, Washington D.C. 20001
phone: (202) 387-2715

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Course Title: Advanced Ada Software Engineering

Objective(s): Present the principles and goals of software engineering as they apply to MIS to teach students to develop COBOL-type applications using the Ada programming language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Object-Oriented Design	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Analysts	Computer Scientists	Engineers
COBOL Programming		

Compiler(s): Meridian OpenAda

Computer(s): Compaq 386; IBM Compatibles

Schedule: The class meets for 1 week.

Prerequisites: Successfully completed another high-order programming course; MIS/COBOL/DPexp

Point of Contact: Ada Technology Group, Inc., 29 "N" St. NW, Washington D.C. 20001
phone: (202) 387-2715

Ada Technology Group, Inc.

Course Title: Advanced Ada Topics and Real-Time Systems

Objective(s): Understand the possible peculiarities of Ada real-time systems or the effects of other specialized features. For software engineers and real-time designers.

Schedule: The class meets for 7 days.

Prerequisites: None

Point of Contact: Ada Technology Group, Inc., 29 "N" St. NW, Washington D.C. 20001
phone: (202) 387-2715

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Course Title: DOD-STD-2167A Compliance

Objective(s): Educate software managers, software project and task leaders who will be responsible for documentation or management of DoD contracts.

Schedule: The class meets for 3 days.

Prerequisites: None

Point of Contact: Ada Technology Group, Inc., 29 "N" St. NW, Washington D.C. 20001
phone: (202) 387-2715

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Course Title: Intermediate Ada

Objective(s): Explain to software engineers, analysts, and designers who need to know the strengths and weaknesses of the Ada language in order to design and develop Ada programs.

Schedule: The class meets for 1 week.

Prerequisites: None

Point of Contact: Ada Technology Group, Inc., 29 "N" St., NW Washington D.C. 20001
phone: (202) 387-2715

Ada Technology Group, Inc.

Course Title: Introductory Ada

Objective(s): Help software engineers, programmers and analysts become familiar with the Ada language and its features in order to write programs in Ada.

Schedule: The class meets for 1 week.

Prerequisites: None

Point of Contact: Ada Technology Group, Inc., 29 "N" St. NW, Washington D.C. 20001
phone: (202) 387-2715

Florida Atlantic University

Course Title: Principles of Software Design

Objective(s): Provide introduction to software engineering issues and principles and to Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Sommerville, I. and R. Morrison. *Software Development in Ada*. Addison-Wesley, 1989.
Barnes, J. *Programming in Ada*. (3rd edition). Addison-Wesley, 1989.

Compiler(s): Vax Ada; Hewlett-Packard 9000/300 Ada

Computer(s): MS-DOS PCs; Vax; SunSparc Hewlett-Packard 9000/300

Schedule: The class meets twice a week for 16 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Roy Levow, Dept. of Computer Science and Engineering, Florida Atlantic University, Boca
Raton, FL 33431, USA
phone: (407) 367-3855
e-mail: roy@cse.fau.edu

Florida Institute of Technology

Course Title: Introduction to Software Development I

Objective(s): Provide an introductory software engineering course.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Software Engineering
Strong Typing		

Audience:

Software Engineers

Textbook(s): Mills, Neuman, Engle. *Introduction to Software Engineering*. (Reproduced locally)

Compiler(s): Meridian OpenAda

Computer(s): IBM-AT Clones

Schedule: The class meets twice a week for 10 weeks.

Prerequisites: High School Graduate

Credit Hours: 5

Point of Contact: Charles B. Engle, Jr., Dept. of Computer Science, Florida Institute of Technology, 1150
West University Blvd, Melbourne, FL 32901, USA
phone: (407) 768-8000, ext. 7563
e-mail: engle@cs.fit.edu

Florida Institute of Technology

Course Title: Introduction to Software Development II

Objective(s): Provide a second introductory software engineering course.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Software Engineering
Strong Typing		

Audience:

Software Engineers

Textbook(s): Mills, Neuman, Engle. *Introduction to Software Engineering*. (Reproduced locally)

Compiler(s): Meridian OpenAda

Computer(s): IBM-AT Clones

Schedule: The class meets twice a week for 10 weeks.

Prerequisites: High School Graduate

Credit Hours: 5

Point of Contact: Charles B. Engle, Jr., Dept. of Computer Science, Florida Institute of Technology, 150 West University Blvd, Melbourne, FL 32901, USA
phone: (407) 768-8000
e-mail: engle@cs.fit.edu

Florida Institute of Technology

Course Title: Introduction to Software Development III

Objective(s): Provide a third introductory software engineering course.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Software Engineering
Strong Typing		

Audience:

Software Engineers

Textbook(s): Mills, Neuman, Engle. *Introduction to Software Engineering*. (Reproduced locally)

Compiler(s): Meridian Open Ada

Computer(s): IBM-AT Clones

Schedule: The class meets twice a week for 10 weeks.

Prerequisites: High School Graduate

Credit Hours: 5

Point of Contact: Charles B. Engle, Jr., Dept. of Computer Science, Florida Institute of Technology, 150 West
University Blvd, Melbourne, FL 32901, USA
phone: (407) 768-8000
e-mail: engle@cs.fit.edu

Florida International University

Course Title: Intermediate Programming

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Computer Scientists

Textbook(s): Naiditch, David. *Rendezvous with Ada: A Programmer's Introduction*. John Wiley and Sons, 1989.
Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988.

Compiler(s): Vax Ada

Computer(s): Vax 8800

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Bill Kraynck, School of Computer Science, Florida International University, Miami, FL 33199, USA
phone: (305) 348-2034
e-mail: kraynek@servax.bitnet

Jacksonville University

Course Title: Software Development/CIS 300

Objective(s): Provide experience in planning, managing, testing, implementing, and maintaining a software development project.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Analysts   Computer Scientists

Textbook(s): Gehani,N. *Ada: An Advanced Introduction Including Reference Manual for the Ada Programming Language*. Prentice-Hall, 1984.

Compiler(s): Janus Ada "Ed Pack"

Computer(s): PCs with 386 math chips

Prerequisites: Two semesters of Pascal, 1 semester systems analysis methods

Credit Hours: 3

Point of Contact: Marilyn Repsher, Division of Science and Mathematics, Jacksonville University, University Blvd. North, Jacksonville, FL 32211, USA
phone: (904) 744-3950 ext. 6354

Manatee Community College

Course Title: Introduction to Ada

Objective(s): Provide instruction on how to use Ada. Includes top-down design, step-wise refinement, and utilizes generics, tasking and modular structures.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Analysts	Computer Scientists	Engineers

Textbook(s): Young, S. J. *An Introduction to Ada*. John Wiley and Sons, 1983.

Compiler(s): Vax Ada; Janus Ada by R&R Software

Computer(s): Vax VT100; 386SX clones

Schedule: The class meets for 16 weeks.

Prerequisites: Successfully completed a Pascal course

Credit Hours: 3

Point of Contact: Don Purdy, Manatee Community College, 5840 26th St. W., Bradenton, FL 34207, USA
phone: (813) 755-1511, ext 4485

University of Florida

Course Title: Introduction to Ada

Objective(s): Present an introduction for programming in Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Software Engineering
Strong Typing	Tasking	

Audience:

Engineers

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Ada Programmers Handbook

Compiler(s): AF Dec Compiler

Computer(s): AF Vax

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Marlowe Henne, University of Florida, Graduate Research Center, Box 1935, Eglin AFB,
FL 32542, USA
phone: (904) 678-2001
e-mail: henne@eglin-Vax

University of Central Florida

Course Title: Ada Programming

Objective(s): Provide an introduction of the Ada language to students.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Strong Typing
Tasking		

Audience:

Computer Scientists   Anyone

Textbook(s): Cohen, N. C. *Ada as a Second Language.* McGraw-Hill, 1986.

Compiler(s): Mainframe Compilers

Computer(s): IBM PC

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Ronald Dutton, University of Central Florida, P.O. Box 25000, Orlando, FL 32816, USA
phone: (407) 282-6260

University of Central Florida

Course Title: Software Engineering

Objective(s): Teach software engineering so students learn design principles and developmental techniques.

Concepts:

Abstract Data Types	Design Concepts	Generics
Object-Oriented Design	Package	Problem Solving
Real-Time Programming	Software Engineering	Tasking

Audience:

Computer Scientists	Engineers

Textbook(s): Booch, G. *Software Compiler*.

Compiler(s): Verdix

Computer(s): Unix

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Ronald Dutton, University of Central Florida, P.O. Box 25000, Orlando, FL 32816, USA
phone: (407) 282-6260

University of South Florida

Course Title: Introduction to Computer Science

Objective(s): Introduce computer science to first year computer science majors and to get them ready for courses that are degree requirements for the computer science degree.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Package
Problem Solving	Strong Typing	Tasking

Audience:

Computer Scientists	Juniors

Textbook(s): *Computer Science Overview*. Addison-Wesley.

Computer(s): Sun

Schedule: The class meets twice a week for 16 weeks.

Prerequisites: None

Credit Hours: 3

Point of Contact: Skip Rougger, University of South Florida, 4202 E. Fowler Ave., Tampa, FL 33620, USA
phone: (813) 974-3652

University of South Florida

Course Title: Introduction to Computer Science (lab)

Objective(s): Introduce computer science to first year computer science majors and to get them ready for courses that are degree requirements for the computer science degree.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Package
Problem Solving	Strong Typing	Tasking

Audience:

Computer Scientists   Juniors

Textbook(s): Feldman, M. B. and E. B. Koffman. *Ada Problem Solving and Program Design*.

Computer(s): Sun

Schedule: The class meets once a week for 16 weeks.

Prerequisites: None

Credit Hours: 1

Point of Contact: Skip Rougger, University of South Florida, 4202 E. Fowler Ave., Tampa, FL 33620, USA
phone: (813) 974-3652

University of West Florida

Course Title: Embedded Programming in Ada

Objective(s): Introduce students to software engineering using the Ada language with emphasis on the embedded system environment. Programming techniques in Ada are emphasized.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Real-Time Programming	Software Engineering	Strong Typing
Tasking		

Audience:

Analysts	Computer Scientists	Engineers

Textbook(s): Elbert. *Embedded Programming in Ada*. 1986.

Compiler(s): Telesoft- Sun 4; Telesoft- IBM Mainframe

Computer(s): Sun Sparcstations; IBM 4381

Schedule: The class meets for 16 weeks.

Prerequisites: block structure

Credit Hours: 3

Point of Contact: Theodore F. Elbert, Division of Computer Scienc.. University of West Florida, Pensacola, FL 32514, USA
phone: (904) 474-2549
e-mail: telbert@dcsuwf.dcsmod.uwf.edu

Integrated Software, Inc.

Course Title: Managing Ada Projects

Prerequisites: None

Point of Contact: Marilyn Pelo, P.O. Box 060295, Palm Bay, FL 32906, USA
phone: (407) 984-1986

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Course Title: Object-Oriented Design Ada Workshop

Prerequisites: None

Point of Contact: Marilyn Pelo, P.O. Box 060295, Palm Bay, FL 32906, USA
phone: (407) 984-1986

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Course Title: On-site Ongoing Training Support

Prerequisites: None

Point of Contact: Marilyn Pelo, P.O. Box 060295, Palm Bay, FL 32906, USA
phone: (407) 984-1986

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Course Title: Programming in Ada

Prerequisites: None

Point of Contact: Marilyn Pelo, P.O. Box 060295, Palm Bay, FL 32906, USA
phone: (407) 984-1986

***

Course Title: Software Engineering with Ada

Prerequisites: None

Point of Contact: Marilyn Pelo, P.O. Box 060295, Palm Bay, FL 32906, USA
phone: (407) 984-1986

***

Course Title: Training Ada Trainers

Prerequisites: None

Point of Contact: Marilyn Pelo, P.O. Box 060295, Palm Bay, FL 32906, USA
phone: (407) 984-1986

Armstrong State College

Course Title: Comparative Languages

Objective(s): Study common features and differences in languages.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Tasking

Audience:

Computer Scientists

Computer(s): Solbowme; Sun Workstation

Schedule: The class meets 5 times a week.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 5

Point of Contact: Sigmund N. Hudson, Dept. of Mathematics and Computer Science, Armstrong State College, Savannah, GA 31419-1997, USA
phone: (912) 927-5317
e-mail: sigma@pirates.armstrong.edu

Columbus College

Course Title: Programming Languages

Objective(s): Present an abstraction of programming language concepts.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Sebogta and Good. *Concepts of Program Languages*.
Luker. *Programming Practice in Ada*.

Computer(s): 386s

Schedule: The class meets 3 times a week for 10 weeks.

Prerequisites: Successfully completed another high-order programming course; Data Structures

Credit Hours: 5

Point of Contact: Jerrel Yates, Dept. of Computer Science, Columbus College, Columbus, GA 31909, USA
phone: (404) 568-2294

Georgia College

Course Title: File Process

Objective(s): Provide introduction to file management and data processing of filing software development tool.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Problem Solving	Strong Typing

Audience:

Computer Scientists   Juniors

Compiler(s): Meridian

Computer(s): 286; 386

Schedule: The class meets 5 times a week for 10 weeks.

Prerequisites: Successfully completed another high-order programming course; two

Credit Hours: 5

Point of Contact: Dr. Gerald Adkins, Dept. of Mathematics and Computer Science, Georgia College, Millinville, GA 31061, USA
phone: (912) 453-5213

Georgia College

Course Title: Software Development and Engineering

Objective(s): Introduce software engineering methods using Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Management Overview	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists	Seniors	Post Graduates

Compiler(s): Meridian

Computer(s): 286; 386

Schedule: The class meets twice a week for 10 weeks.

Prerequisites: Four-year students and professional programmers

Credit Hours: 5

Point of Contact: Dr. Gerald Adkins, Dept. of Mathematics and Computer Science, Georgia College, Millinville, GA 31061, USA
phone: (912) 453-5213

Georgia Southwestern College

Course Title: Special Topics in Computer Science

Objective(s): Teach students Ada to achieve the goals of software engineering. Emphasize relationship Ada constructs and corresponding software engineering principles.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988, 2nd ed.
Booch, Grady. *Software Components With Ada Structures, Tools, and Subsystems*. Benjamin-Cummings, 1987.

Computer(s): IBM PS/2

Schedule: The class meets 5 times a week for 10 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 5

Point of Contact: Dr. Arun P. Gupta, Division of Computer and Applied Sciences, Georgia Southwestern College, Americus, GA 31709, USA
phone: (912) 928-1466
e-mail: gupta@gswaixn3.gsw.peachnet.edu

Georgia State University

Course Title: Data Structures

Objective(s): Provide students with a balance between the theoretical and applied data structures in Ada.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Problem Solving	Strong Typing

Audience:

Computer Scientists

Textbook(s): Feldman, M. B. *Data Structures with Ada*. Prentice-Hall, 1985.
Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Meridian Ada Software Systems

Computer(s): PCs 286 Based

Prerequisites: Successfully completed another high-order programming course; Discrete Math

Credit Hours: 45 qtr hours

Point of Contact: Dr. M. D. Fraser, Dept. of Mathematics and Computer Science, Georgia State University, University Plaza, Atlanta, GA 30303, USA
phone: (404) 651-2245

Georgia State University

Course Title: Design and Analysis of Algorithms

Objective(s): Provide students with techniques of designing efficient algorithms using lower bound arguments, and examples of sorting, graphs, strings matching,etc.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Computer Scientists

Textbook(s): Baase. *Computer Algorithms: Introduction to Design and Analysis.*

Compiler(s): Meridian Ada Software Systems

Computer(s): PCs 286 Based

Prerequisites: Successfully completed another high-order programming course; Data Structure

Credit Hours: 45 qtr hours

Point of Contact: Dr. Susan Prasad, Dept. of Mathematics and Computer Science, Georgia State University, University Plaza, Atlanta, GA 30303, USA
phone: (404) 651-2253

Georgia State University

Course Title: Organization of Programming Languages

Objective(s): Offer comparative study of several languages including interpreters, real-time environment, behavior and formal concepts.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Paatt. *Programming Languages: Design and Implementation.*

Compiler(s): Meridian Ada Software Systems

Computer(s): PCs 286 Based

Prerequisites: Successfully completed another high-order programming course; Data Structure Assembly

Credit Hours: 45 qtr hours

Point of Contact: Dr. K.N. King, Dept. of Mathematics and Computer Science, Georgia State University, University Plaza, Atlanta, GA 30303, USA
phone: (404) 651-2245
e-mail: matking@gsusgi2.gsu.edu

Georgia State University

Course Title: Software Engineering

Objective(s): Study techniques for large-scale scientific or technical software development. Includes most phases of life cycle, including implementation.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.

Compiler(s): Meridian Ada Software Systems

Computer(s): PCs 286 Based

Prerequisites: Successfully completed another high-order programming course.

Credit Hours: 45 qtr hours

Point of Contact: Dr. Ross Gagliano, Dept. of Mathematics and Computer Sciences, Georgia State University, University Plaza, Atlanta, GA 30303, USA
phone: (404) 651-2253

Mercer University

Course Title: Ada Programming

Objective(s): Learn to program in Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Strong Typing
Tasking		

Audience:

Computer Scientists	Engineers

Textbook(s): Caverty and Goldstein. *Introduction to Ada*.

Compiler(s): MicroVax Ada

Computer(s): 386 SCO Unix; MicroVax; 386 PC

Schedule: The class meets 3 times a week.

Prerequisites: Successfully completed any other programming course

Credit Hours: 2

Point of Contact: Will Briggs, Dept. of Computer Science, Mercer University, P.O. Box 179, Macon, GA
31207, USA
phone: (912) 752-4171
e-mail: wbriggs@uga.bitnet

Mercer University

Course Title: Organization of Programming Languages

Objective(s): Understand the major concepts and issues of programming languages design.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): MacLennon. *Organization of Programming Languages.*

Compiler(s): MicroVax Ada

Computer(s): MicroVax; 386 PC

Schedule: The class meets 3 times a week.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Will Briggs, Dept. of Computer Sciences, Mercer University, P.O. Box 179, Macon, GA
31207, USA
phone: (912) 752-4171
e-mail: wbriggs@uga.bitnet

Oglethorpe University

Course Title: Data Structures/3542

Objective(s): Provide a course in standard data structures and algorithms. Presents introduction to programming in Ada language.

Concepts:

Abstract Data Types	Design Concepts	Generics
Package	Problem Solving	Real-Time Programming
Strong Typing		

Audience:

Computer Scientists

Textbook(s): Kruse. *Data Structures*. Prentice-Hall, 1987.
Habermann, A. and Perry, D. E. *Ada for Experienced Programmers*. Addison- Wesley, 1983.

Compiler(s): A&R's Janus Ada

Computer(s): 386 SXs

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Ronald L. Carlisle, Oglethorpe University, 4484 Peachtree Rd. NE, Atlanta, GA 30319, USA
phone: (404) 261-1441

Southern College of Technology

Course Title: Advanced Ada

Objective(s): Provide real-time programming experience.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Meridian

Computer(s): IBM PS/2

Schedule: The class meets twice a week for 11 weeks.

Prerequisites: Introduction to Ada

Credit Hours: 5

Point of Contact: Ron Schroeder, Southern College of Technology, Marietta, GA 30060, USA
phone: (404) 528-7401

Southern College of Technology

Course Title: Introduction to Ada

Objective(s): Introduce Ada to Computer Science students. Features software engineering.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Management Overview	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Computer Scientists

Textbook(s): Feldman, M. B. and E. B. Koffman. *Ada Problem Solving and Program Design*. Addison-Wesley, 1991.

Compiler(s): Meridian

Computer(s): PC Labs

Schedule: The class meets twice a week for 11 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 5

Point of Contact: Ron Schroeder, Southern College of Technology, Marietta, GA 30060, USA
phone: (404) 528-7401

U.S. Army Computer Science School

Course Title: Ada Programming Systems Automation

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Management Overview	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Officers

Textbook(s): Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988.
Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Alsys on IBM 4381

Computer(s): IBM 4381 Desktop

Schedule: The class meets for 4 weeks.

Prerequisites: Centralized selection

Point of Contact: Maj. Drew Hamilton, ATZH-SSW, US Army Computer Science School, Fort Gordon, GA
30905, USA
phone: (404) 791-2586
e-mail: drew@vuse.vawgerbilt.edu

Chaminade University

Course Title: Ada Programming

Objective(s): Provide a study of the uses and objectives of Ada; compare to other languages; study DoD requirements and standards for languages.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Tasking		

Audience:

Analysts	Computer Scientists	Managers

Textbook(s): None

Compiler(s): Janus

Computer(s): 386 PC Clones; 486 PC

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Neil Freeman, Chaminade University, 3140 Waalae Ave., Honolulu, HI 96816, USA
phone: (808) 735-4855

Illinois Institute of Technology

Course Title: Concurrent Programming/CS 545

Objective(s): Provide a study of the concepts and practices in concurrent programming. Includes language design for concurrent programming.

Concepts:

      Real-Time Programming   Tasking

Audience:

      Computer Scientists

Textbook(s): Gehani, N. *Ada: Concurrent Programming*. Prentice-Hall, 1984

Compiler(s): Telesoft

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: None

Credit Hours: 3

Point of Contact: Dr. T. Elrad, IIT Center, Chicago, IL 60076, USA
              phone: (312) 567-5142
              e-mail: cselrad@iitvax.iit.edu

Parks College of St. Louis University

Course Title: Software Engineering with Ada

Objective(s): Provide an introduction to the principles of software engineering, and implementation of these principles using Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Computer Scientists	Engineers

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Verdix; Meridian

Computer(s): MicroVax II; Ultrix

Schedule: The class meets 3 times a week.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Dr. Charles Kirkpatrick, Parks College of Saint Louis University, Cahokia, IL 62206, USA
phone: (618) 337-7500

Southern Illinois University—Edwardsville

Course Title: Programming Languages

Objective(s): For students to learn the Ada language and to prepare them to be Ada programmers.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Analysts	Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Sebesta. *Concepts of Programming Languages*.

Compiler(s): Vax Ada

Computer(s): MicroVax II

Prerequisites: Successfully completed any other programming course; Pascal & Data

Credit Hours: 4

Point of Contact: J. R. Hattemer, Dept. of Computer of Science, Southern Illinois University at Edwardsville, Edwardsville, IL 62026-1656, USA
phone: (618) 692-2386

University of Illinois—Chicago

Course Title: Programming Languages Design

Objective(s): Find out ingredients of a good programming language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists	Engineers

Textbook(s): MacLennan. *Principles of Programming Languages*. HRW Publishers, 1987.

Computer(s): Sun Sparcstations

Schedule: The class meets once a week.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. Ardeshir Goshtasby, Electrical Engineering and Computer Science Dept., University of Illinois at Chicago, Chicago, IL 606804358, USA
phone: (312) 996-5489
e-mail: ardeshir@uicbert.eecs.uic.edu

Wheaton College

Course Title: Data Structures

Objective(s): Study data structures—Algorithms of facilities to support the survey course. Ada is one of the languages studied.

Concepts:

Abstract Data Types Package	Management Overview	Object-Oriented Design

Audience:

Computer Scientists

Compiler(s): None

Computer(s): Vax; DEC 3100; Mars; 386 IBM

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: Dr. John Haywood, Mathematics/Computer Science Dept., Wheaton College, Wheaton, IL 60187, USA
phone: (708) 752-5871
e-mail: johnh@wheaton.uucp

Wheaton College

Course Title: Introductory Survey

Objective(s): Survey ideas of object-oriented programming, data abstracts, data structures. Ada is one of the languages studied.

Concepts:

Exception Handling   Generics   Real-Time Programming
Tasking

Audience:

Computer Scientists

Compiler(s): None

Computer(s): Vax; DEC 3100; Mars; 386 IBM

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: Dr. John Haywood, Mathematics/Computer Science Dept., Wheaton College, Wheaton, IL 60187, USA
phone: (708) 752-5871
e-mail: johnh@wheaton.uucp

Wheaton College

Course Title: Programming Languages

Objective(s): Provide programming language course that surveys the facilities of various programming languages.

Audience:

Computer Scientists

Compiler(s): None

Computer(s): Vax; DEC 3100; Mars; 386 IBM

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: Dr. John Haywood, Mathematics/Computer Science Dept., Wheaton College, Wheaton, IL 60187, USA
phone: (708) 752-5871
e-mail: johnh@wheaton.uucp

Ball State University

Course Title: Seminar in Computer Science

Objective(s): Teach Ada with an emphasis on parallel processing techniques.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.

Compiler(s): Vax Ada

Computer(s): Vax terminals

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. Milton Underkoffler, Computer Science Dept., Ball State University, Muncie, IN 47306, USA
phone: (317) 285-8665

Indiana-Purdue University

Course Title: Data Structures

Objective(s): Presents traditional topics.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists   Students

Textbook(s): Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988.
Feldman, M. B. *Data Structures with Ada*. Prentice-Hall, 1985.

Compiler(s): Vax DEC Ada

Computer(s): Vax

Prerequisites: Computer Science I and II

Credit Hours: 3

Point of Contact: Dr. James L. Silver, Chair, Dept. of Computer Science, Indiana University—Purdue
University at Fort Wayne, Fort Wayne, IN 46805, USA
phone: (219) 481-6177
e-mail: silver@cVax.ipfw.indiana.edu

Purdue University—Calumet

Course Title: Language Components

Objective(s): Have the students become familiar with Ada language.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Problem Solving	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Computer(s): Vax

Schedule: The class meets once a week for 15 weeks.

Prerequisites: Know two other languages

Credit Hours: 1

Point of Contact: Dan Troy, Purdue University—Calumet, Hammond, IN 46323, USA
phone: (219) 989-2706
e-mail: troydj@pucal.bitnet

Rose-Hulman Institute of Technology

Course Title: Data Structures I & II

Objective(s): Present a study of data structures (internal and external), introduction to ADT's, exceptions and object-oriented programming.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Strong Typing

Audience:

Computer Scientists

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Vax Ada

Computer(s): Vax 6240

Schedule: The class meets 4 times a week for 10 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: Frank H. Young, Rose-Hulman Institute of Technology, 5500 E Wabash Avenue, Terre Haute, IN 47803, USA
phone: (812) 877-8401
e-mail: young@cs.rose-hulman.edu

Taylor University

Course Title: Software Engineering

Objective(s): Introduce concepts of software engineering and large system development. Introduce Ada and its features for use in engineering design.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Analysts	Computer Scientists

Compiler(s): Vax VMS Ada

Computer(s): Cluster of Vaxen

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: William Toll, Taylor University, Upland, IN 46989, USA
phone: (317) 998-4931
e-mail: wltoll@tayloru

University of Evansville

Course Title: Ada

Objective(s): Teach the Ada language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Strong Typing
Tasking		

Audience:

Computer Scientists

Compiler(s): Janus

Computer(s): IBM Mainframes

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 1

Point of Contact: James Westfall, University of Evansville, 1800 Lincoln Avenue, Evansville, IN 47722, USA
phone: (812) 479-2655

Valparaiso University

Course Title: Topics in Electrical and Computer Engineering

Objective(s): Introduce Ada as a software engineering tool. Various levels of capability and interest for any student. Modular development, of useful packages for engineering and researching multi computer tasking are emphasized.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Engineers

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.
Coverty and Goldstein. *Introduction to Ada*.
Texel, P. *Introduction to Ada. Packages for Programmers*. Wadsworth Press, 1986.
Ada Language Reference Manual

Compiler(s): Meridian student Ada; OpenAda

Computer(s): Zenith 386; IBM

Schedule: The class meets for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. Rodney J. Bohlman, Gellersen 204, Valparaiso University, Valparaiso, IN 46383, USA
phone: (219) 464-5030
e-mail: ece.rjb@valpo.bitnet

Advanced Software Technology Specialists

Course Title: Ada Design and Coding—1

Schedule: The class meets for 1 week.

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
                   phone: (219) 639-6305

***

Course Title: Ada Design and Coding—2

Schedule: The class meets for 1 week.

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
                   phone: (219) 639-6305

***

Course Title: Ada Design and Coding—3

Schedule: The class meets for 1 week.

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
                   phone: (219) 639-6305

***

Course Title: Ada Project Management

Schedule: The class meets for 4 days.

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
                   phone: (219) 639-6305
***
Course Title: Ada Technology Transition Executive Overview

Schedule: The class meets for one day. -

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
                   phone: (219) 639-6305

Advanced Software Technology Specialists

Course Title: Ada Testing, Quality Assurance

Schedule: The class meets for two days.

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
phone: (219) 639-6305

***

Course Title: Ada Tools and Environments

Schedule: The class meets for 2 days.

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
phone: (219) 639-6305

***

Course Title: DOD-STD-2167A

Schedule: The class meets for one day.

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
phone: (219) 639-6305

***

Course Title: DOD-STD-2167A & Tailoring Ada Projects

Schedule: The class meets for 2 days.

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
phone: (219) 639-6305

***

Course Title: Object-Oriented Development in Ada

Schedule: The class meets for 1 week.

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
phone: (219) 639-6305

Advanced Software Technology Specialists

Course Title: Object-Oriented Requirements Analysis

Schedule: The class meets for 1 week.

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
phone: (219) 639-6305

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Course Title: Software Engineering Methods in Ada

Schedule: The class meets for 2 days.

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
phone: (219) 639-6305

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Course Title: Software Economics in Ada

Schedule: The class meets for 2 days.

Prerequisites: None

Point of Contact: Donald G. Firesmith, 4 Lutz Road, Ossian, IN 46777, USA
phone: (219) 639-6305

University of Iowa

Course Title: Programming Language Concepts

Objective(s): Teach the fundamental concepts which distinguish languages from each other.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Strong Typing

Audience:

Computer Scientists

Textbook(s): Varies From Offering to Offering

Compiler(s): VADS Ada (Verdix)

Computer(s): IBM PC; Apple Macintosh

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; discrete mathematics

Credit Hours: 3

Point of Contact: Ken Slonneger, Computer Science, University of Iowa, Iowa City, IA 52242, USA
phone: (319) 335-0745
e-mail: slonnegr@cs.uiowa.edu

Kansas State University

Course Title: Programming Science

Objective(s): Include the development of formal specifications of packages using Ada declarations and VDM structures. It also includes an introduction to verification of specifications and programs.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Problem Solving
Software Engineering		

Audience:

Computer Scientists

Textbook(s): Class notes

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; formal logic

Credit Hours: 3

Point of Contact: Dr. William Hankley, Dept. Computing Science, 234 Nichols Hall, Kansas State University, Manhattan, KS 66506, USA
phone: (913) 532-6350
e-mail: hankley@cis.ksu.edu

Saint Mary College

Course Title: Data Structures/CS 455

Objective(s): Cover data abstraction, linked lists, stacks, queues, trees, and graphs   Emphasis placed on recursive techniques and generic packages.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package		

Audience:

Analysts	Computer Scientists

Compiler(s): Janus Ada

Computer(s): IBM PC/XT; IBM 386

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: CS 352

Credit Hours: 3

Point of Contact: Victor Meyer, Saint Mary College, 4100 S Fourth Street, Leavenworth, KS 66048, USA
phone: (913) 682-5151, ext 319

Saint Mary College

Course Title: File Constructs/CS 454

Objective(s): Cover techniques of sequential and direct file access, index-sequential, hashing, sort-merge and b trees.

Concepts:

Exception Handling   Package   Problem Solving

Audience:

Analysts   Computer Scientists

Textbook(s): Miller, N.E. *File Structures: With Ada*. Benjamin-Cummings, 1989.

Compiler(s): Janus Ada

Computer(s): IBM PC/XT; IBM 386

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: CS 352

Credit Hours: 3

Point of Contact: Victor Meyer, Saint Mary College, 4100 S. Fourth Street, Leavenworth, KS 66048, USA
phone: (913) 682-5151

Saint Mary College

Course Title: General Programming I Ada/CS 252

Objective(s): Provide a first course in Ada. It covers data types control structures, simple input/output, procedures and functions.

Concepts:

Design Concepts   Problem Solving   Strong Typing

Audience:

Beginners

Textbook(s): Skansholm, J. *Ada from the Beginning.* Addison-Wesley, 1988.

Compiler(s): Janus Ada

Computer(s): IBM PC/XT; IBM 386

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Victor Meyer, Saint Mary College, 4100 S. Fourth Street, Leavenworth, KS 66048, USA
phone: (913) 682-5151

Saint Mary College

Course Title: General Programming II/Ada CS 352

Objective(s): Provide a continuation of CS 252. It covers parameter passing, records and arrays, exceptions, access variables, sequential and direct file access, and packages.

Concepts:

Design Concepts	Exception Handling	Package
Problem Solving	Strong Typing	

Audience:

Beginners

Textbook(s): Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988.

Compiler(s): Janus Ada

Computer(s): IBM PC/XT; IBM 386

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: CS 252 or Pascal

Credit Hours: 3

Point of Contact: Victor Meyer, Saint Mary College, 4100 S. Fourth Street, Leavenworth, KS 66048, USA
phone: (913) 682-5151

Saint Mary College

Course Title: General Programming III/Ada CS 452

Objective(s): Provide a continuation of CS 352. It covers generics, tasking, pragmas, object-oriented programming.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Tasking	

Audience:

Analysts   Computer Scientists

Compiler(s): Janus Ada

Computer(s): IBM PC/XT; IBM 386

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: CS 352

Credit Hours: 3

Point of Contact: Victor Meyer, Saint Mary College, 4100 S. 4th Street, Leavenworth, KS 66048, USA
phone: (913) 682-5151

Saint Mary College

Course Title: Software Engineering

Objective(s): Cover life-cycle of software systems including requirement specifications, system design, implementation, testing, and documentation.

Concepts:

Design Concepts   Management Overview   Object-Oriented Design
Software Engineering

Audience:

Analysts   Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.

Compiler(s): Janus Ada

Computer(s): IBM PC/XT; IBM 386

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: CS 352

Credit Hours: 3

Point of Contact: Victor Meyer, Saint Mary College, 4100 S. Fourth Street, Leavenworth, KS 66048, USA
phone: (913) 682-5151

Washburn University

Course Title: Object-Oriented Programming

Objective(s): Familiarize student with object-oriented programs development paradigm.

Concepts:

Abstract Data Types	Design Concepts	Generics
Management Overview	Object-Oriented Design	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Analysts

Textbook(s): Booch, G. *Object-Oriented Design*. Benjamin-Cummings, 1991.

Compiler(s): Ada on IBM RS/6000 through consortium

Computer(s): IBM RS/6000

Schedule: The class meets for 18 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Bob Boncella, BT 100C, Washburn University, Topeka, KS 66621, USA
                    phone: (913) 231-1010, ext 1739
                    e-mail: zzbonc@acc.wvacc.edu

Brescia College

Course Title: Ada

Objective(s): Learn program methodology using a language designed by computer science instructors and professionals.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Package	Real-Time Programming	Strong Typing
Tasking		

Audience:

Analysts	Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.

Compiler(s): Ada-Ed.

Computer(s): IBM 386s

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Jerry Maren, Computer Science, Brescia College, 717 Frederica Street, Owensboro, KY 42301, USA
phone: (502) 685-3131

Eastern Kentucky University

Course Title: Advanced Programming in Ada

Objective(s): Introduce the Ada language as well as object-oriented analysis and design. Introduction to tasking with concurrent programming.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Real-Time Programming	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Vax Ada (VMS)

Computer(s): Vax 6410; 3B2/1000

Prerequisites: Successfully completed another high-order programming course; data structures

Credit Hours: 3

Point of Contact: Richard A Rink, Dept. of Computer Science, Eastern Kentucky University, Wallace 402, Richmond, KY 40475, USA
phone: (606) 622-1935

Murray State University

Course Title: Data Structures

Objective(s): Teach data structures, abstract data types, implementation decisions, and algorithm analysis.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Strong Typing

Audience:

Computer Scientists

Textbook(s): Feldman, M. B. *Data Structures with Ada*. Prentice-Hall, 1985.
Olsen, E. W. and S. B. Whitehill. *Ada for Programmers*. Prentice-Hall, 1983

Compiler(s): Irvine on an AT&T 3B2-400/UNIX V.3.0

Computer(s): AT&T 3B2; IBM PC compatibles; 4381

Schedule: The class meets twice a week for 16 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. William F Lyle III, Dept. of Computer Studies, Murray State University, Murray, KY
42071, USA
phone: (502) 762-6217
e-mail: fcswfl01@msukyum.bitnet

Northern Kentucky University

Course Title: Data and Algorithms II

Objective(s): Focus on chapters 11-17 of Booch, including: software components in Ada plus file systems, tasking, large programming assignments.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Booch, Grady. *Software Components With Ada Structures, Tools, and Subsystems*. Benjamin-Cummings, 1987.

Compiler(s): DEC Vax Ada

Computer(s): Vax 4000; Sun Sparcstations

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Prof. Charles E Frank, Dept. of Mathematics/Computer Science, Northern Kentucky University, Highland Heights, KY 41099, USA
phone: (606) 572-5320
e-mail: frank@nkuvax.bitnet

Northern Kentucky University

Course Title: Data Structures and Algorithms I

Objective(s): Focus on chapters 4-10 of Booch, including: Software Components in Ada and Plus recursion. The course teaches data structures (stacks, lists and queues), programming techniques, and problem solving.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Booch, Grady. *Software Components With Ada Structures, Tools, and Subsystems*. Benjamin-Cummings, 1987.

Compiler(s): DEC Vax Ada

Computer(s): Vax 4000; Sun Sparcstation

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Prof. Charles E Frank, Dept. of Mathematics/Computer Science, Northern Kentucky University, Highland Heights, KY 41099, USA
phone: (606) 572-5320
e-mail: frank@nkuvax.bitnet

Northern Kentucky University

Course Title: Software Engineering

Objective(s): Include the process from the feasibility study, requirements, design, implementation, and testing within a large team project.

Concepts:

Software Engineering

Audience:

Computer Scientists

Textbook(s): Sommerville. *Software Engineering*, 3rd ed. Addison-Wesley

Compiler(s): DEC Vax Ada

Computer(s): PCs, Macintoshes

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Prof. Charles E Frank, Department of Mathematics/Computer Science, Northern Kentucky University, Highland Heights, KY 41099, USA
phone: (606) 572-5320
e-mail: frank@nkuVax.bitnet

Western Kentucky University

Course Title: Ada Programming

Objective(s): Teach Ada Syntax with emphasis on features not available with Pascal.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Package
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Saib, S. and R.E. Fritz. *Introduction to Programming in Ada*. HR&W, 1985.

Compiler(s): Vax Ada

Computer(s): Vax

Schedule: The class meets twice a week for 8 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 1.5

Point of Contact: John Crenshaw, Computer Science, Western Kentucky University, Bowling Green, KY
42101, USA
phone: (502) 745-4642

University of Maine

Course Title: Software Engineering I

Objective(s): Provide an in-depth study of software life cycle issues-case study using Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists	Engineers

Textbook(s): Liskov and Guttag. *Abstraction and Specification in Program Development*. MIT Press.
Ada Language Reference Manual

Compiler(s): DEC Ada/VMS

Computer(s): Sun-4; IBM/RT; Vax stations; 8088 386 PCs networked

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Undergraduate Computer Science Curriculum

Credit Hours: 3

Point of Contact: Prof. Larry Latour, Dept. of Computer Science, University of Maine, 222 Neville Hall,
Orono, ME 04469, USA
phone: (207) 581-3523
e-mail: larry@gandalf.umcs.maine.edu

University of Maine

Course Title: Software Engineering II

Objective(s): Provide a second course of an in-depth study of software life cycle issues- case study using Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists   Engineers

Textbook(s): Liskov and Guttag. *Abstraction and Specification in Program Development.* MIT Press.
Ada Language Reference Manual

Compiler(s): DEC Ada/VMS

Computer(s): Sun-4; IBM/RT Vax stations; 8088 386 PCs Networked

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Undergraduate Computer Science Curriculum

Credit Hours: 3

Point of Contact: Prof. Larry Latour, Dept. of Computer Science, University of Maine, 222 Neville Hall,
Orono, ME 04469, USA
phone: (207) 581-3523
e-mail: larry@gandalf.umcs.maine.edu

Anne Arundel Community College

Course Title: Introduction to Ada/CSC 152

Objective(s): Emphasize designing a solution strategy, and test and code programs in Ada. Topics are user-defined types, modular programming, exception handlers, recursion, built-in data structures (array and record) and simple file processing.

Concepts:

Abstract Data Types　　　　Exception Handling

Audience:

Analysts　　　　Computer Scientists

Compiler(s): Janus Ada

Computer(s): IBM PS/2

Schedule: The class meets twice a week for 16 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: A. Jay Tarleton, Anne Arundel Community College, 101 College Parkway, Arnold, MD 21012, USA
phone: (301) 541-2442

Anne Arundel Community College

Course Title: Intermediate Ada/CSC 252

Objective(s): Provide study of design methodologies, variant records, access type, derived and private types, generics, scope, visibility and tasking.

Concepts:

      Design Concepts   Generics

Audience:

      Analysts   Computer Scientists

Compiler(s): Janus Ada; Ada Compiler on Prime 486

Computer(s): IBM PS/2; Prime 486

Schedule: The class meets twice a week for 16 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: A. Jay Tarleton, Anne Arundel Community College, C-221, 101 College Parkway, Arnold, MD 21012, USA
phone: (301) 541-2442

Hood College

Course Title: Programming Language Workshop

Objective(s): Give students experience in writing programs in Ada w/emphasis on the unique characteristics of the language which facilitate writing well-structured correct programs.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Problem Solving	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Baines. *Programming in Ada*, 3rd ed. Addison Wesley, 1989.
Gehani, N. *Ada: An Advanced Introduction Including Reference Manual for the Ada Programming Language*. Prentice-Hall, 1984.

Compiler(s): Meridian OpenAda; PC DOS Ver 4.1.1; Vax Ada

Computer(s): IBM PC clones; DEC 6210

Schedule: The class meets once a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 2

Point of Contact: Elizabeth S. Adams, Dept. of Mathematics and Computer Science, Hood College, Frederick, MD 21701, USA
phone: (301) 696-3733

Montgomery College

Course Title: Ada Programming

Objective(s): Teach the fundamentals of Ada programming.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Problem Solving		

Audience:

Computer Scientists

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Meridian and Ada

Computer(s): IBM 386s

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Alara Lee Hildenbrand, Montgomery College, Rockville Campus, 51 Mannakee Street, Rockville, MD 20850, USA
phone: (301) 279-5171

Towson State University

Course Title: Software Engineering With Ada

Objective(s): Study software engineering with Ada as adjunct topic in support of object-oriented, design, and real-time requirements.

Concepts:

Design Concepts	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Pressman. *Software Engineering*.
Findlay and Booch. *Ada Languages and Methodology*.

Compiler(s): Vax based Ada; Meridian PC-based

Computer(s): Vax; PC

Schedule: The class meets twice a week.

Prerequisites: Successfully completed any other programming course; Instructor's OK

Credit Hours: 4

Point of Contact: Fred J. Hudson, Dept. of Computer Science, Towson State University, Towson, MD 21204, USA
phone: (410) 830-2633

Fastrak Training, Inc.

Course Title: DOD-STD-2167A and Software Development Plan

Objective(s): Provide guidelines for developing and evaluating software development plans for Ada projects within the framework of DOD-STD-2167A and with a software engineering background.

Concepts:

Software Engineering

Audience:

Engineers   Managers

Schedule: The class meets once.

Prerequisites: None

Point of Contact: Abby Eden, Fastrak, 9175 Guilford Road Suite 300, Columbia, MD 21046, USA
phone: (301) 924-0050

***

Course Title: Ada Cost Modeling

Objective(s): Use Ada constructive cost modeling software to estimate effort and schedule for Ada projects based on number of lines of code and 20 different factors.

Audience:

Managers   Project Control

Computer(s): IBM PC clones

Schedule: The class meets once.

Prerequisites: None

Point of Contact: Abby Eden, Fastrak, 9175 Guilford Road Suite 300, Columbia, MD 21046, USA
phone: (301) 924-0050

Fastrak Training, Inc.

Course Title: Ada—A Management Perspective

Objective(s): Give current information about the Ada marketplace, introduce Ada design and language features, discuss risk and risk reduction approaches and provide practical knowledge for managing Ada projects.

Concepts:

Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Strong Typing

Audience:

Managers

Schedule: The class meets for 3 days.

Prerequisites: None

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Course Title: Advanced Ada Programming

Objective(s): Write Ada programs using good software engineering practices, effective design, advanced types, generics, tasks and low level features. Real-time and task execution issues are emphasized.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Engineers

Textbook(s): ANSI/MIL-STD-1815A

Compiler(s): Meridian

Computer(s): IBM PC clones

Schedule: The class meets for 1 week.

Prerequisites: Introduction to Ada Programming

Point of Contact: Abby Eden, Fastrak, 9175 Guilford Road Suite 300, Columbia, MD 21046, USA
phone: (301) 924-0050

Fastrak Training, Inc.

Course Title: Evaluating Ada Code

Objective(s): Provide guidelines for evaluating whether Ada code is written to effectively use features which support and enforce readability, reliability, understandability, maintainability and portability.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Software Engineering	Strong Typing

Textbook(s): The Software Productivity Consortium *Ada & Quality and Style Guidelines for Professional Programmers*
ANSI/MIL-STD-1815A

Schedule: The class meets for 1 week.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Abby Eden, Fastrak, 9175 Guilford Road Suite 300, Columbia, MD 21046, USA
phone: (301) 924-0050

***

Course Title: Introduction to Ada Programming

Objective(s): Focus on writing Ada programs that use the package facility, scalar and composite types, text-I/O, separate compilation units and file I/O.

Concepts:

Exception Handling	Generics	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Engineers

Textbook(s): ANSI/MIL-STD-1815A

Compiler(s): Meridian

Computer(s): IBM PC clones

Schedule: The class meets for 1 week.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Abby Eden, Fastrak, 9175 Guilford Road Suite 300, Columbia, MD 21046, USA
phone: (301) 924-0050

Fastrak Training, Inc.

Course Title: Object-Oriented Requirements Analysis and Design

Objective(s): Provide object-oriented methods and textual and graphical notations for identifying object, static and dynamic problem domain requirements analysis, preliminary and detailed design.

Concepts:

Abstract Data Types	Design Concepts	Object-Oriented Design

Textbook(s): Seidewitz and Stark. *Principles of Object-Oriented Software Development with Ada*. 1991.

Schedule: The class meets for 1 week.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Abby Eden, 9175 Guilford Road Suite 300, Columbia, MD 21046, USA
phone: (301) 924-0050

***

Course Title: Software Engineering with Ada

Objective(s): Focus on quality issues affecting software plans, process, products, standards. Discuss each life cycle phase with respect to prototyping, PDL, design methods, style guidelines,and metrics.

Concepts:

Exception Handling	Generics	Package
Software Engineering	Strong Typing	

Audience:

Quality Analysis	Independent Verification and Validation

Schedule: The class meets 4 days.

Prerequisites: None

Point of Contact: Abby Eden, 9175 Guilford Road Suite 300, Columbia, MD 21046, USA
phone: (301) 924-0050

University of Massachusetts at Lowell

Course Title: Software Engineering II

Objective(s): Extend classical software engineering methodologies via formal specifications and software process models and data engineering techniques.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Bergins and Lugi. *Software Engineering with Abstractions.*

Computer(s): Vax Risk workstations; VT 300/400 terminals

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; Software Engineering I

Credit Hours: 3

Point of Contact: Dr. Robert J Lechner, Computer Science Dept. WL229, University of Massachusetts at Lowell, 1 University Avenue, Lowell, MA 01854, USA
phone: (508) 934-3642
e-mail: lechner@cs.ulowell.edu

Western New England College

Course Title: The Ada Language

Objective(s): Focus on syntax and mechanics of the Ada language, emphasizing packages. The course is a co-requisite for Computer Science II course.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988.

Compiler(s): Data General (Rolm) Compiler on mini computer

Computer(s): PCs (IBM compatibles), Data General MV 10000

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 1

Point of Contact: Lloyd Emerson, Dept. of Mathematics and Computer Science, Western New England College, 1215 Wilbraham Road, Springfield, MA 01119-2684, USA
phone: (413) 782-1603

Alsys, Inc.

Course Title: Ada for Cobol Programmers

Objective(s): Provide an in-depth treatment of the sequential parts of Ada, with an orientation towards business data processing applications and an emphasis on software engineering principles. For COBOL programmers.

Audience:

Computer Scientists

Schedule: The class meets for 3 weeks.

Prerequisites: Cobol

Point of Contact: Dr. Benjamin Brosgol, 67 South Bedford Street, Burlington, MA 01803-5152, USA
phone: (617) 270-0030

***

Course Title: Introduction to the Ada Language and Culture

Objective(s): Teach a broad overview of Ada. This seminar provides a summary of the design goals and main features of Ada, concentrating on how the use of Ada affects each stage of the software development cycle.

Audience:

Managers

Schedule: The class meets once.

Prerequisites: None

Point of Contact: Dr. Benjamin Brosgol, 67 South Bedford Street, Burlington, MA 01803-5152, USA
phone: (617) 270-0030

Alsys, Inc.

Course Title: Object-oriented Design and Ada

Objective(s): Teach the major principles of the Ada design, the main features of the Ada language, how to use Ada effectively in software construction and the practical use of object-oriented design, within the context of software development life cycle.

Concepts:

Object-Oriented Design

Audience:

Analysts   Computer Scientists   Engineers
Managers

Schedule: The class meets for 1 week.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Dr. Benjamin Brosgol, 67 South Bedford Street, Burlington, MA 01803-5152, USA
phone: (617) 270-0030

***

Course Title: Programming in Ada

Objective(s): Present a summary of the Ada language features, concentrating on the newer facilities such as the package, generics, and tasking. For Pascal, Fortran, or C programmers.

Audience:

Computer Scientists

Schedule: The class meets for 1 week.

Prerequisites: None

Point of Contact: Dr. Benjamin Brosgol, 67 South Bedford Street, Burlington, MA 01803-5152, USA
phone: (617) 270-0030

Alsys, Inc.

Course Title: Programming in Ada: In Depth Course

Objective(s): Covers the same basic material as the 5-day version, but goes into more detail on the language features and their usage. It consists of lectures and workshop, and provides a comparison of Ada with other languages.

Audience:

Computer Scientists

Schedule: The class meets for 2 weeks.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Dr. Benjamin Brosgol, 67 South Bedford Street, Burlington, MA 01803-5152, USA
phone: (617) 270-0030

***

Course Title: Real-Time Software with Ada

Objective(s): Focus on the real-time features of Ada, concentrating on multi-tasking and methodologies for developing embedded systems software. For high order language programmers with embedded systems experience.

Audience:

Computer Scientists

Schedule: The class meets for 3 days.

Prerequisites: None

Point of Contact: Dr. Benjamin Brosgol, 67 South Bedford Street, Burlington, MA 01803-5152, USA
phone: (617) 270-0030

Alsys, Inc.

Course Title: Real-Time Programming in Ada

Objective(s): Teach the students elements of programming in Ada, with emphasis on real-time applications. For high order language programmers. Previous Ada knowledge not required.

Concepts:

Real-Time Programming

Audience:

Computer Scientists

Schedule: The class meets for 1 week.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Dr. Benjamin Brosgol, 67 South Bedford Street, Burlington, MA 01803-5152, USA
phone: (617) 270-0030

Albion College

Course Title: Programming Languages

Objective(s): Teach fundamental concepts of programming languages with a focus on various paradigms and experience working with various models of those paradigms.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Dershem and Jipping. *Programming Languages*. Wadsworth.
Cooper. *Standard Pascal User Reference Manual*.

Compiler(s): None

Computer(s): VaxII650; Macintoshes; PC clones

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 4

Point of Contact: Ron Fryxell, Dept. of Mathematics, Albion College, 611 East Porter Street, Albion, MI 49224, USA
phone: (517) 629-0287
e-mail: rfryxell@albion.bitnet

Calvin College

Course Title: Structure of Programming Languages

Objective(s): Present a survey of features of modern high-level programming languages. We utilize a text that provides examples in several different languages. The practical part of the course is to explore those same concepts in Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Sethi. *Programming Language Concepts and Constructs*.

Compiler(s): Tartan Labs; Sun-3-60; Ada Compiler

Computer(s): Sparc II; Sparc IPC workstations

Schedule: The class meets 4 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. Joel Adams, Dept. of Mathematics and Computer Science, Calvin College, Grand Rapids, MI 49546, USA
phone: (616) 957-8562
e-mail: adams@usurp.calvin.edu

Eastern Michigan University

Course Title: Programming in Ada

Objective(s): Teach students who are familiar with Pascal the basic concepts of programming in Ada.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Problem Solving	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): To be determined

Compiler(s): Telesoft Ada Vax; Meridian Ada; Gemtech Ada

Computer(s): Vax; 386sx clones; Macintosh SE

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: George E Haynam, Computer Science Dept., Eastern Michigan University, 511 Pray-Harrold, Ypsilanti, MI 48197, USA
phone: (313) 487-1063
e-mail: csc_dept@emunix.emich.edu

Hope College

Course Title: Programming Languages

Objective(s): Introduce the structure and philosophy of programming languages.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Dershem and Jipping. *Programming Languages: Structures and Abstractions*. Wadsworth, 1990.

Compiler(s): Verdix Ada on Vax

Computer(s): PC compatible; Vax; Sun Sparcstations

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Herb Dershem, Dept. of Computer Science, Hope College, 137 East 12th Street, Holland, MI 49423, USA
phone: (616) 394-7508
e-mail: dershem@cs.hope.edu

Michigan Technological University

Course Title: Programming Languages

Objective(s): Survey features and concepts of current programming languages.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Maclennan. *Principles of Programming Languages*, 2nd ed.

Compiler(s): A370 on an IBM 4381

Computer(s): Sequent Balance and Symmetry; Sun workstations; IBM 4381

Schedule: The class meets 3 times a week for 10 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: John Lowther, Dept. of Computer Science, Michigan Technological University, 1400 Townsend Drive, Houghton, MI 49931, USA
phone: (906) 487-2183
e-mail: john@cs.mtu.edu

Western Michigan University

Course Title: Programming Languages

Objective(s): Provide understanding of the underlying principles, structure and operating environment of modern programming languages.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists	Engineers

Textbook(s): Ghezzi and Jazyeri. *Programming Language Concepts*. John Wiley and Sons.
Caberly. *Introduction to Ada*. Brooks-Cole.

Compiler(s): Dec Vax compiler

Computer(s): Vax 8700; 8650; 6520 workstations and terminals

Schedule: The class meets 3 times a week.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. Ken Williams, Computer Science Dept., Western Michigan University, Kalamazoo, MI 49008, USA
phone: (616) 387-5645
e-mail: williams@cs.wmich.edu

Winona State University

Course Title: Programming in Ada

Objective(s): Teach the syntax of Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Students

Textbook(s): Handouts

Computer(s): Vax VMS; Unix

Schedule: The class meets twice a week for 10 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 4

Point of Contact: Dr. Narayan Debnath, Winona State University, 151 W Sanborn Street, Winona, MN 55987, USA
phone: (507) 457-5261
e-mail: debnath@msus1.bitnet

Mississippi College

Course Title: Survey of Programming Languages/CSC 408

Objective(s): Teach 3 HCC. Ada is one of these languages.

Concepts:

Abstract Data Types   Design Concepts   Exception Handling
Generics   Object-Oriented Design   Package
Problem Solving   Real-Time Programming

Audience:

Computer Scientists

Compiler(s): Meridian Ada for Micros

Computer(s): IBM ps/2, model 50z

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Daniel Glenn Wiggins, Mississippi College, P.O. Box 4025, Clinton, MS 39058, USA
phone: (601) 925-3467

University of Southern Mississippi

Course Title: Software Engineering

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988

Compiler(s): Vax Ada

Computer(s): Vax II 780 MicroVax II; Honeywell DPS90; TI 1500

Schedule: The class meets for 17 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Ralph B Bisland Jr, University of Southern Mississippi, Box 8380 Southern Station,
Hattiesburg, MS 39406, USA
phone: (601) 266-4949
e-mail: bisland@usmcp6.bitnet

Northeast Missouri State University

Course Title: Block-Structured Language Programming in Ada

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Watt, D.A., et al. *Ada Language and Methodology*. Prentice-Hall, 1987.

Compiler(s): Janus Ada

Computer(s): IBM PS/2, Model 55-SX

Schedule: The class meets 3 times a week for 16 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. John V Erhart, Northeast Missouri State University, Kirksville, MO 63501, USA
phone: (816) 785-4328

Southeast Missouri State University

Course Title: Ada Programming

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Real-Time Programming	Strong Typing
Tasking		

Audience:

E.S. Majors

Computer(s): PS/55

Prerequisites: ccessfully completed another high-order programming course

Credit Hours: 1

Point of Contact: Dr. Bill Weber, Dept. of Computer Science, Southeast Missouri State University, One
University Plaza, Cape Girardeau, MO 63701-4799, USA
phone: (314) 651-2525
e-mail: c519buc@semovm.bitnet

Southwest Baptist University

Course Title: Advanced Data Structures

Objective(s): Introduce students to advanced data structures, both internal and external, introduce formal specifications, explore ADT's.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Loomis. *Data Management and File Structures.*
Ada Programming Handbook

Compiler(s): Meridian OpenAda (V.4.1)

Computer(s): IBM PC ATs

Schedule: The class meets twice a week.

Prerequisites: Junior standing

Credit Hours: 3

Point of Contact: Scott Sigman, Computer Science Dept., Southwest Baptist University, 1601 S Springfield Avenue, Bolivar, MO 65613, USA
phone: (417) 326-1704

Southwest Missouri State University

Course Title: Special Topics in Computer Science/CSC 397

Objective(s): Cover topics outside the core curriculum. It has been used to teach Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Real-Time Programming	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Dec Vax Vms Ada Compiler on a Dec Vax 11/750

Computer(s): Dec Vax, IBM PC Compatible, IBM 4381

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; data structures

Credit Hours: 3

Point of Contact: Dr. Bruno Schmidt, Computer Science Dept., Southwest Baptist University, 901 S National
Avenue, Springfield, MO 65804, USA
phone: (417) 836-4157
e-mail: brs440f@smsVaxa.bitnet

Montana State University

Course Title: Parallel Distributing Programming

Objective(s): Provide a survey of programming paradigms and programming language techniques for parallel and distributed programming.

Concepts:

   Tasking

Audience:

   Computer Scientists

Textbook(s): Collection of survey articles and Ada tasking references

Compiler(s): Dec Ada on Vax VMS (restricted use basis)

Computer(s): Vax VMS; PC clusters; various Unix systems

Schedule: The class meets twice a week for 10 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Ray Babcock, 410 Roberts Hall, Bozeman, MT 59717, USA
phone: (406) 994-4780
e-mail: babcock@cs.montana.edu

Montana State University

Course Title: Programming Language Concepts

Objective(s): Introduce programming concepts, such as typing, tasking, object-oriented principles, and programming environments.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Real-Time Programming	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Sethi. *Programming Languages*. Addison-Wesley

Compiler(s): DEC Ada on Vax VMS

Computer(s): Vax VMS; PC clusters; various Unix systems

Schedule: The class meets twice a week for 10 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Ray Babcock, Computer Science Dept., Montana State University, 410 Roberts Hall, Bozeman, MT 59717, USA
phone: (406) 994-4780
e-mail: babcock@cs.montana.edu

Montana State University

Course Title: Software Engineering I

Objective(s): Teach students to define requirements, design, implement, test, and maintain large software products.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists	Engineers

Textbook(s): Pressman. *Software Engineering: A Practitioners Approach*, 3rd ed. McGraw Hill, 1991.
Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988

Compiler(s): O/D Janus Site License

Computer(s): PC 86; 286; 386; 2H Macintoshes; Workstations; Dec 9000

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course; Junior or Senior

Credit Hours: 3

Point of Contact: Ray Babcock, Computer Science Dept., Montana State University, 410 Roberts Hall, Bozeman, MT 59717, USA
phone: (406) 994-4780
e-mail: babcock@cs.montana.edu

Montana State University

Course Title: Software Engineering II

Objective(s): Teach students to define requirements, design, implement, test, and maintain large software products.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists   Engineers

Textbook(s): Pressman. *Software Engineering: A Practitioners Approach*, 3rd ed. McGraw Hill, 1991.
Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988

Compiler(s): O/D Janus Site License

Computer(s): PC 86; 286; 386; 2H Macintoshes, Workstations, Dec 9000

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Juniors or Seniors

Credit Hours: 3

Point of Contact: Ray Babcock, Computer Science Dept., Montana State University, 410 Roberts Hall, Bozeman, MT 59717, USA
phone: (406) 994-4780
e-mail: babcock@cs.montana.edu

University of Nebraska—Omaha

Course Title: Select Topics/CS 298

Objective(s): Provide an introduction to Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Management Overview	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Skansholm, J. *Ada from the Beginning.* Addison-Wesley, 1988.

Compiler(s): Telesoft Vax

Computer(s): Ada 650; network PC

Schedule: The class meets twice a week.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Ralph Tomlinson, Dept. of Computer Science, University of Nebraska-Omaha, 60th &
Dodge Street, Omaha, NE 68182, USA
phone: (402) 554-2986
e-mail: tomlinson@ws.unomaha.edu

Daniel Webster College

Course Title: Data Structures I

Objective(s): Study traditional data structures and algorithms, but from an abstract data type point of view.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.
Volper, D. and Katz, M. D. *Introduction to Programming Using Ada*. Prentice-Hall, 1990.

Compiler(s): Dec Ada for VMS and Ultrix

Computer(s): Dec MicroVax 3800; Dec System 5400

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course; assembly programming

Credit Hours: 3

Point of Contact: J. Peter Weston, Daniel Webster College, 20 University Drive, Nashua, NH 03063, USA
phone: (603) 883-3556
email: weston@willow.ulowell.edu

Daniel Webster College

Course Title: Data Structures II

Objective(s): Study traditional data structures and algorithms, but from an abstract data type point of view. This is the second part of the course.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.
Volper, D. and Katz, M. D. *Introduction to Programming Using Ada*. Prentice-Hall, 1990.

Compiler(s): Dec Ada for VMS and Ultrix

Computer(s): Dec MicroVax 3800; Dec System 5400

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Assembly programming

Credit Hours: 3

Point of Contact: J. Peter Weston, Daniel Webster College, 20 University Drive, Nashua, NH 03063, USA
phone: (603) 883-3556
email: weston@willow.ulowell.edu

Atlantic Community College

Course Title: Introduction to Ada Programming

Objective(s): Recognize features that make Ada distinct from other programming languages. Read/write/debug programs using those features.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Object-Oriented Design	Package	Problem Solving
Real-Time Programming	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Skansholm, J. *Ada from the Beginning.* Addison-Wesley, 1988.

Compiler(s): Janus

Computer(s): PCs

Schedule: The class meets once a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Otto Herandez, CISM Dept., Atlantic Community College, Rt. 322, Black Horse Pike, Mays Landing, NJ 08330, USA
phone: (609) 343-4978

Glassboro State College

Course Title: Programming in Ada

Objective(s): Teach Ada syntax and use.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Naiditch, D. *Rendezvous with Ada: A Programmer's Introduction.* John Wiley and Sons, 1989.

Compiler(s): Digital Vax Ada

Computer(s): Vax 4000

Schedule: The class meets twice a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course; Structures and Algorithms

Credit Hours: 3

Point of Contact: A.M. Berman, Dept. of Computer Science, Glassboro State College, Glassboro, NJ 08028, USA
phone: (609) 863-6521
e-mail: berman@glassboro.edu

Rutgers University

Course Title: Principles Programming Language/CS 314

Objective(s): Teach general principles of several programming languages.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Object-Oriented Design	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Sethi. *Programming Languages*.

Compiler(s): Vax

Computer(s): Sun workstations

Schedule: The class meets twice a week for 12 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 4

Point of Contact: Andrew Gelsey, Rutgers University, New Brunswick, NJ 08903, USA
phone: (908) 932-2097
e-mail: gelsey@cs.rutgers.edu

Stockton State College

Course Title: Data Structure

Objective(s): Provide students with a systematic study of advanced topics in data structures.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988. 580p. 2nd ed.

Compiler(s): Vax Ada; Meridian Ada

Computer(s): Vax 6410; PCs

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; programming and problem solving II

Credit Hours: 4

Point of Contact: Prof. Murray R Kirch, Information Dept., Stockton State College, Pomona, NJ 08240, USA
phone: (609) 652-4353
e-mail: mrk@Vax002.stockton.edu

Stockton State College

Course Title: Operating Systems

Objective(s): Provide introduction to fundamental principles and techniques employed in the design of operating systems. Programming assignments involving Ada tasking are used to study concurrency problems.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Real-Time Programming	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.
Silberchatz and Peterson. *Operating System Concepts*.

Compiler(s): Vax Ada; Meridian Ada

Computer(s): Vax 6410; PCs

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; Date Structures

Credit Hours: 4

Point of Contact: Prof. Murray R Kirch, Information Dept., Stockton State College, Pomona, NJ 08240, USA
phone: (609) 652-4353
e-mail: mrk@Vax002.stockton.edu

Stockton State College

Course Title: Programming and Problem Solving I

Objective(s): Provide an introduction to the concepts and principles of the science of programming, elements of software engineering, comprehensive programming assignments using Ada are given.

Concepts:

Design Concepts   Problem Solving   Software Engineering

Audience:

Computer Scientists   MIS

Textbook(s): Skansholm, J. *Ada from the Beginning.* Addison-Wesley, 1988.

Compiler(s): Vax Ada; Meridian Ada

Computer(s): Vax 6410; PCs

Schedule: The class meets for 15 weeks.

Prerequisites: High school math

Credit Hours: 4

Point of Contact: Prof. Murray R Kirch, Information Dept., Stockton State College, Pomona, NJ 08240, USA
phone: (609) 652-4353
e-mail: mrk@Vax002.stockton.edu

Stockton State College

Course Title: Programming and Problem Solving II

Objective(s): Provide an introduction to basic data structures such as stacks, queues, lists, trees, and graphs as well as algorithms for their implementation.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists   MIS

Textbook(s): Feldman, M. B. *Data Structures with Ada*. Prentice-Hall, 1985.

Compiler(s): Vax Ada; Meridian Ada

Computer(s): Vax 6410; PCs

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; Programming and Problem Solving I

Credit Hours: 4

Point of Contact: Prof. Murray R Kirch, Information Dept., Stockton State College, Pomona, NJ 08240, USA
phone: (609) 652-4353
e-mail: mrk@Vax002.stockton.edu

Stockton State College

Course Title: Programming Language Structures

Objective(s): Present a study of the history, design and implementation of programming languages. Emphasis is placed on language features which support various paradigms for problem solving and software design. Ada is used to implement an interpreter.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Maciennen. *Programming Languages: Design, Implementation, and Evaluation.*
Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Vax Ada; Meridian Ada

Computer(s): Vax 6410; PCs

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; Data Structures

Credit Hours: 4

Point of Contact: Prof. Murray R Kirch, Information Dept., Stockton State College, Pomona, NJ 08240, USA
phone: (609) 652-4353
e-mail: mrk@Vax002.stockton.edu

Stockton State College

Course Title: Software Engineering

Objective(s): Present an introduction to the technical and administrative aspects of the specification, design, and implementation of Ada software systems.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Sommerville, I. *Software Engineering*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Vax Ada; Meridian Ada

Computer(s): Vax 6410; PCs

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: Prof. Murray R Kirch, Information Dept., Stockton State College, Pomona, NJ 08240, USA
phone: (609) 652-435
e-mail: mrk@Vax002.stockton.edu

Canisius College

Course Title: Programming Languages

Objective(s): Systematic study of programming languages and their implementations, including applications from various fields.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Wilson. *Comparative Programming Languages*. Addison-Wesley, 1988.
Gehani, N. *Ada: An Advanced Introduction Including Reference Manual for the Ada Programming. Language*.
Wilensky. *Common Lispcraft*. Norton, 1986.

Compiler(s): NYU translator and interpreter for Ada

Computer(s): Sun Sparcstations; Vax 11/750

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. Jeffrey J McConnell, Canisius College, 2001 Main Street, Buffalo, NY 14208, USA
phone: (716) 888-2430
e-mail: mcconnell@klaatu.cs.canisius.edu

Ithaca College

Course Title: Ada Programming

Objective(s): Introduce Ada syntax and semantics and programming style.

Concepts:

Exception Handling	Generics	Package
Software Engineering	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988.

Compiler(s): Meridian OpenAda V4.1 for PC DOS systems

Computer(s): None

Schedule: The class meets once a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course; Data Structures.

Credit Hours: 1

Point of Contact: Chuck Leska, Dept. of Mathematics/Computer Science, Ithaca College, Ithaca, NY 14850, USA
phone: (607) 274-3032
e-mail: leska@ithaca

Le Moyne College

Course Title: Ada Programming

Objective(s): Teach the features of Ada and their applications to experienced programming practitioners.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Strong Typing	Tasking	

Audience:

Engineers   Supervisors

Textbook(s): Watt, D.A., et al. *Ada Language and Methodology*, Prentice-Hall, 1987.

Compiler(s): Dec Vax compiler Meridian AdaVantage compiler

Computer(s): Vax 8810; IBM ps/2 model 5oz

Schedule: The class meets 4 times a week for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 4

Point of Contact: James F Smith, Computer Science Dept., Le Moyne College, Syracuse, NY 13214, USA
          phone: (315) 445-4544
          e-mail: smith@lemoyne.bitnet

Le Moyne College

Course Title: Introduction to Programming Methodology/CSC 1

Objective(s): Teach the concepts, principles, and methods of state of the art programming, with implementation in Ada. Teaches the fundamentals of Ada and its constructs.

Concepts:

Design Concepts	Exception Handling	Generics
Package	Problem Solving	Strong Typing

Audience:

Computer Scientists

Textbook(s): Feldman, M. B. and Koffman, E. B. *Ada Problem Solving and Program Design*. Addison-Wesley, 1991.

Compiler(s): Dec Vax compiler; Meridian AdaVantage compiler

Computer(s): Vax 8810; IBM ps/2 model 5oz

Schedule: The class meets 4 times a week for 15 weeks.

Prerequisites: None

Credit Hours: 4

Point of Contact: James F Smith, Computer Science Dept., Le Moyne College, Syracuse, NY 13214, USA
phone: (315) 445-4544
e-mail: smith@lemoyne.bitnet

Le Moyne College

Course Title: Data Structures and Program Development

Objective(s): Teach the classical concepts of data structures, implementing them as ADTs and other reusable modules in Ada.

Concepts:

Abstract Data Types	Design Concepts	Generics
Object-Oriented Design	Real-Time Programming	Tasking

Audience:

Computer Scientists

Textbook(s): Schneider and Bruell. *Concepts in Data Structures and Software Development*. West, 1991.

Compiler(s): Dec Vax compiler; Meridian AdaVantage compiler

Computer(s): Vax 8810; IBM ps/2 model 5oz

Schedule: The class meets 4 times a week for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 4

Point of Contact: James F Smith, Computer Science Dept., Le Moyne College, Syracuse, NY 13214, USA
phone: (315) 445-4544
e-mail: smith@lemoyne.bitnet

Manhattan College

Course Title: Programming Languages

Objective(s): Present a survey of programming languages for design and implementation. It is a prelude to course in compile design.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists   Engineers

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.
Maclennan. *Principles of Programming Languages*.

Compiler(s): Vax Ada; IBM RT Ada; Meridian Ada

Computer(s): IBM ps/2 Model 70; IBM RT Workstations (Unix)

Schedule: The class meets for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Nicholas DeLillo, Dept. of Mathematics/Computer Science, Manhattan College, 4513 Manhattan College Parkway, Riverdale, NY 10471, USA
phone: (212) 920-0375
e-mail: csf@marVax.bitnet

New York Institute of Technology

Course Title: Software Engineering

Objective(s): Teach the principles of software engineering using the feature of Ada to enforce and encourage principles of good design.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.

Compiler(s): Vax Ada

Computer(s): Vax

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Data Structures

Credit Hours: 3

Point of Contact: John W. Hove, Computer Science Dept., New York Institute of Technology, Old Westbury, NY 11568, USA
phone: (516) 686-7458

SUNY—College at Oswego

Course Title: Software Engineering/CSC 380

Objective(s): Apply software engineering methodologies in creative software.

Prerequisites: None

Point of Contact: Prof Mohammad Mohammadi, Computer Science Dept., SUNY—College at Oswego, Oswego, NY 13126, USA
phone: (315) 341-2689
e-mail: muhammad@oswego.oswego.edu

SUNY—College at Plattsburgh

Course Title: Introduction to Computer Science

Objective(s): Provide a typical Computer Science I course.

Concepts:

   Design Concepts   Problem Solving

Textbook(s): Feldman, M. B. and Koffman, E. B. *Ada Problem Solving and Program Design*. Addison-Wesley, 1991.

Compiler(s): Vax Ada

Computer(s): Vax 6200

Schedule: The class meets 4 times a week for 14 weeks.

Prerequisites: none

Credit Hours: 4

Point of Contact: John McCormick, Computer Science Dept., SUNY—College at Plattsburgh, Plattsburgh, NY 12901, USA
phone: (518) 564-2785
e-mail: mccormjw@snyplava.bitnet

SUNY—College at Plattsburgh

Course Title: Real Time System Design

Objective(s): Present an introduction to the design and implementation of real-time systems.

Concepts:

Design Concepts   Problem Solving

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988. 580p. 2nd ed.
Gonzalez, Dean W. *Ada Programmer's Handbook and Language Reference Manual*. Benjamin-Cummings, 1991.

Compiler(s): Vax Ada; Vax Eln Ada

Computer(s): Micro Vax II; RTVax 1000, Vaxstation

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Courses

Credit Hours: 3

Point of Contact: John McCormick, Computer Science Dept., SUNY—College at Plattsburgh, Plattsburgh, NY
12901, USA
phone: (518) 564-2785
e-mail: mccormjw@snyplava.bitnet

SUNY—Institute of Technology

Course Title: Ada Software Development/CSC 347

Objective(s): Learn the syntax/semantics of Ada and methodologies for Ada software specification and design.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988. 580p. 2nd ed.

Compiler(s): Alsys for Sun-3

Computer(s): Sun-3; Sun Sparcstation; Dec 500; PC compatibles

Schedule: The class meets twice a week.

Prerequisites: Data structures

Credit Hours: 4

Point of Contact: Dr. Bruno Andriamanalimanana, Dept. of Computer Science, SUNY—Institute of Technology, P.O. Box 3050, Utica, NY 13504, USA
phone: (315) 792-7232
e-mail: flora@sunyit.edu

SUNY—Potsdam College

Course Title: Programming in Ada

Objective(s): Teach software engineering techniques using Ada -- highlighting Ada's key features which enhances its usefulness for software engineering.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Real-Time Programming	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Shumate. *Ada Programming*, 2nd ed. John Wiley and Sons.
Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.
Habermann, A. and D. E. Perry. *Ada for Experienced Programmers*. Addison- Wesley, 1983.

Compiler(s): Janus Ada

Computer(s): Zenith PCs; Vax 4000-610

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 1

Point of Contact: Steven Minisker, CIS Dept., SUNY—Potsdam, Potsdam, NY 13676, USA
phone: (315) 267-2228
e-mail: minsker@snypotva.bitnet

United States Military Academy

Course Title: CS 403

Objective(s): Teach software engineering using Ada as the vehicle.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988. 580p. 2nd ed.
Tremblay, J., et al. *Programming in Ada*. McGraw-Hill, 1990.

Compiler(s): SMSCRC Verdix-Ada

Computer(s): Unisys 386; AT&T 3B2 1000

Schedule: The class meets 3 times a week.

Prerequisites: a series

Credit Hours: 3

Point of Contact: Captain Engbrecht, USMA, Dept. of Electrical Engineering and Computer Science, West
Point, NY 10996, USA
phone: (914) 938-5565
e-mail: dj3656.eecs1.usma.edu

East Carolina University

Course Title: Independent Study

Objective(s): Teach basic syntax and semantics of the Ada Language.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Watt, D.A., et al. *Ada Language and Methodology*. Prentice-Hall, 1987.

Compiler(s): Dec Ada

Computer(s): Dec Vax 4000

Schedule: Independent study

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. Robert G Fainter, Dept. of Mathematics, East Carolina University, Greenville, NC 27858, USA
phone: (919) 757-4104
e-mail: mafainte@ecuvm1.bitnet

Elon College

Course Title: Software Methodologies

Objective(s): Offer introduction to Ada concepts and follow-up of data structures.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Students

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Vax 8350

Computer(s): Network Micro Vax; Sun Workstations; Unix

Schedule: The class meets once a week for 13 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Al Carpentar, P.O. Box 2181, Elon College, NC 27244, USA
phone: (919) 584-2287

Fayetteville State University

Course Title: Introduction to Programming Methodology/CSC 120

Objective(s): Provide a foundation for study in Computer Science. Students develop good style and commonly accepted practices in writing programs in a block-structured high-level language.

Concepts:

Design Concepts   Problem Solving   Strong Typing

Audience:

Students

Textbook(s): Tremblay, B., et al. *Programming in Ada*. McGraw Hill, 1989.
Tremblay, B. *Introduction to Computer Science*. McGraw Hill, 1989.

Compiler(s): Software Leverage, Parallel-leveraged Ada

Computer(s): Sequent S-27

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: College algebra

Credit Hours: 3

Point of Contact: Dr. Kwok C Wong, Dept. of Mathematics/Computer Science, Fayetteville State University, 1720 Purdue Drive, Fayetteville, NC 28301, USA
phone: (919) 486-1697

Fayetteville State University

Course Title: Program Design and Implementation/CSC 130

Objective(s): Develop a disciplined approach to designing, coding, and testing of programs. Linked lists, stacks, queues, trees, searching and sorting are among the topics. Second of 2 year course.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Strong Typing		

Audience:

Students

Textbook(s): Tremblay, B., et al. *Programming in Ada*. McGraw Hill, 1989.
Tremblay, B., *Introduction to Computer Science*. McGraw Hill, 1989.

Compiler(s): Software Leverage, Parallel-leveraged Ada

Computer(s): Sequent S-27

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. Kwok C Wong, Dept. of Mathematics/Computer Science, Fayetteville State University, 1720 Purdue Drive, Fayetteville, NC 28301, USA
phone: (919) 486-1697

Fayetteville State University

Course Title: Data Structures and Algorithm/CSC 220

Objective(s): Explore data structures from various viewpoints: Express algorithms in terms of operations of the data structure, and complexity of operations. Reinforce and extend knowledge of data structures gained in CSC 130.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Package	Problem Solving	Strong Typing

Audience:

Students

Textbook(s): Feldman, M. B. *Data Structures with Ada*. Prentice-Hall, 1985.

Compiler(s): Software Leverage; Parallel-leveraged Ada

Computer(s): Sequent S-27

Schedule: The class meets twice a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course; CSC 130

Credit Hours: 3

Point of Contact: Dr. Kwok C Wong. Dept. of Mathematics/Computer Science, Fayetteville State University, 1720 Purdue Drive, Fayetteville, NC 28301, USA
phone: (919) 486-1697

Fayetteville State University

Course Title: Introduction to Compiler Design Theory/CSC 410

Objective(s):   Provide introduction to basic theory for design of compilers, finite automata, context free grammars, lexical syntactical, semantic analysis, symbol tables.

Concepts:

Abstract Data Types	Design Concepts	Generics
Package	Software Engineering	Strong Typing

Audience:

Students

Textbook(s): LeBlanc, Fisher. *Crafting A Compiler*. Wesley, 1988.

Compiler(s): Software Leverage, Parallel-leveraged Ada

Computer(s): Sequent S-27

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Ada programming

Credit Hours: 3

Point of Contact: Dr. Kwok C Wong, Dept. of Mathematics/Computer Science, Fayetteville State University, 1720 Purdue Drive, Fayetteville, NC 28301, USA
phone: (919) 486-1697

Fayetteville State University

Course Title: Software Engineering Ada/CSC 470

Objective(s): Provide good Ada design and programming style, and object-oriented development methods that exploit the power of Ada and help students manage large, complex software systems.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Students

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.

Compiler(s): Software Leverage, Parallel-leveraged Ada

Computer(s): Sequent S-27

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course; data base design

Credit Hours: 3

Point of Contact: Dr. Kwok C Wong, Dept. of Mathematics/Computer Science, 1720 Purdue Drive, Fayetteville, NC 28301, USA
phone: (919) 486-1697

Lenoir Rhyne College

Course Title: Data Structures in Ada

Objective(s): Design, implement, and analyze data structures using Ada. There is basic coverage of the analysis of algorithms and program correctness.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Shumate, K.C. *Understanding Ada: With Abstract Data Types*, 2nd ed. John Wiley and Sons, 1989. *Ada Language Reference Manual*

Compiler(s): Ada on Vax VMS

Computer(s): PCs; Vax

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dick Hull, Lenoir Rhyne College, Hickory, NC 28601, USA
phone: (704) 328-7293
e-mail: Hull@LRC.edu

University of North Carolina—Greensboro

Course Title: Programming In Ada

Objective(s): Give a complete overview of Ada, including history, software engineering principles, design techniques,and programming, focusing on packages, generics, and exception-handling.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.
Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.

Compiler(s): Digital Vax Ada

Computer(s): Vax II/785; IBM Compatibles

Schedule: The class meets for 16 weeks.

Prerequisites: Successfully completed another high-order programming course; Pascal

Credit Hours: 3

Point of Contact: Dr. Robert Mers, Dept. of Mathematics/Computer Science, University of North Carolina, Greensboro, NC 27411, USA
phone: (919) 334-7823
e-mail: mersrc@atsuVax1.bitnet

North Dakota State University

Course Title: New Developments in Programming Languages

Objective(s): Describe and motivate more recent thinking on programming.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Booch, Grady. *Software Components With Ada Structures, Tools, and Subsystems*. Benjamin-Cummings, 1987.

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Computer programming

Credit Hours: 3

Point of Contact: Ken I Magel, P.O. Box 5075, North Dakota State University, Fargo, ND 58105, USA
phone: (701) 237-8189
e-mail: kmagel@plains.nodak.edu

North Dakota State University

Course Title: Object-Oriented Systems

Objective(s): Introduce object-oriented systems. Discussion of their advantages and limitations.

Concepts:

Abstract Data Types	Design Concepts	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists   Engineers

Textbook(s): Booch. *Object-Oriented Design*. 1991.
Rumbaugh. *Object-Oriented Modeling Design*.

Compiler(s): Meridian on IBM mainframe

Computer(s): Micro-computers

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Ken I Magel, North Dakota State University, P.O. Box 5075, Fargo, ND 58105, USA
phone: (701) 237-8189
e-mail: kmagel@plains.nodak.edu

University of North Dakota

Course Title: Programming Languages-Ada

Objective(s): Teach the syntax of Ada.

Concepts:

Abstract Data Types	Exception Handling	Management Overview
Package	Problem Solving	Software Engineering
Strong Typing		

Audience:

Students

Compiler(s): Vax 11780

Computer(s): IBM mainframe; ATT 3B2; Vax 11780; Vax 8530; 386s

Schedule: The class meets once a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Thomas P Wiggen, University of North Dakota, P.O. Box 8181, University Station, Grand Forks, ND 58202, USA
phone: (701) 777-3477
e-mail: wiggen@plains.nodak.edu

Central State University

Course Title: Advanced Topics

Concepts:

Abstract Data Types	Design Concepts	Package
Problem Solving	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Shumate, K. *Understanding Ada*. HarperCollins, 1974.

Compiler(s): Vax Ada

Computer(s): Vax 4000 PC compatibles

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: Dr. Stephen Brewster, Dept. of Mathematics and Computer Science, Central State
University, Wilberforce, OH 45384, USA
phone: (513) 376-6364
e-mail: sbrewster@cesvxa.ces.edu

Hiram College

Course Title: Programming Languages

Objective(s): Provide an introduction to the theory and design of modern programming languages.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Management Overview	Object-Oriented Design	Package
Problem Solving	Strong Typing	Tasking

Audience:

Computer Scientists

Compiler(s): DEC Ada

Computer(s): Vax 6000; Vax 8350

Prerequisites: Successfully completed another high-order programming course; Data Structures

Credit Hours: 5

Point of Contact: Dr. Michael A Grajek, Hiram College, Colton-Room 20, Hiram, OH 44234, USA
phone: (216) 569-5247
e-mail: grajekma@hiramb.bitnet

Kent State University

Course Title: Ada Programming

Objective(s): Provide up-to-date instruction of the Ada language for programmers. The course concentrates on basic concepts used in software environments in which Ada has been developed.

Concepts:

Abstract Data Types	Design Concepts	Management Overview
Object-Oriented Design	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Telesoft Ada; Meridian

Computer(s): Vax, Sun

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 2

Point of Contact: Olaf P Stackelberg, Dept. of Mathematics and Computer Science, Kent State University, Kent, OH 44242, USA
phone: (216) 672-2209
e-mail: stack@mcs.kent.edu

Kent State University

Course Title: Advanced Ada Programming

Objective(s): Deal with construction systems with Ada. The Ada tasking model is introduced and explained. Generics are examined, exceptions and exception handlers are detailed and machine-dependent features of Ada are explored.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Telesoft Ada; Meridian

Computer(s): Vax; Sun

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 2

Point of Contact: Olaf P Stackelberg, Dept. of Mathematics and Computer Science, Kent State University, Kent, OH 44242, USA
phone: (216) 672-2209
e-mail: stack@mcs.kent.edu

Mount Union College

Course Title: Language System Programming in Ada

Objective(s): Introduce students to concepts of large programs, group work, standardization and modularization.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists	Juniors	Seniors

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Meridian

Computer(s): IBM compatibles

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: James E Kimble Jr, Mount Union College, 1972 Clark, Alliance, OH 44601, USA
phone: (216) 823-3623

Muskingum College

Course Title: Computer Science I

Objective(s): Match ACM Recommendations

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists	Managers

Textbook(s): Tremblay, J. *Introduction to Computer Science.*

Compiler(s): Dec VMS

Computer(s): Vax 6310; Macintosh IIfx (Aux)

Schedule: The class meets 3 times a week.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Dr. Ralph G Hollingsworth, MACS Dept., Muskingum College, New Concord, OH 43762, USA
phone: (614) 826-8307
e-mail: ralph@Vax.muskingum.edu

Muskingum College

Course Title: Computer Science II

Objective(s): Provide software engineering concepts.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists	Managers

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Dec VMS

Computer(s): Vax 6310; Macintosh IIfx (Aux)

Schedule: The class meets 3 times a week.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Dr. Ralph G Hollingsworth, MACS Dept., Muskingum College,New Concord, OH 43762, USA
phone: (614) 826-8307
e-mail: ralph@Vax.muskingum.edu

Ohio State University

Course Title: Software Components Using Ada

Objective(s): Teach students to overcome a variety of problems in creating reusable Ada generic packages. These problems include parameterization, partial instantiation, optimization, testing and verification, and storage management difficulties such as memory leaks.

Concepts:

Abstract Data Types	Design Concepts	Generics
Object-Oriented Design	Package	Software Engineering
Strong Typing		

Audience:

Computer Scientists

Textbook(s): Booch, Grady. *Software Components With Ada Structures, Tools, and Subsystems.* Benjamin-Cummings, 1987.

Compiler(s): Meridian Ada on Sun-4

Computer(s): Sun-4; Macintosh

Schedule: The class meets for 10 weeks.

Prerequisites: Successfully completed another high-order programming course; formal specific

Credit Hours: 3

Point of Contact: Prof Bruce W Weide, Dept. of Computer and Information Science, The Ohio State University, 2036 Neil Avenue Mall, Columbus, OH 43210, USA
phone: (614) 292-1517
e-mail: weide@cis.ohio-state.edu

Ohio University—Athens

Course Title: Data Structures

Objective(s): Presents a usual data structures course with emphasis on abstract data types.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Strong Typing		

Audience:

Computer Scientists

Textbook(s): Feldman, M. B. *Data Structures with Ada*. Prentice-Hall, 1985.

Compiler(s): Vax Ada

Computer(s): Vax-II, DECStation

Schedule: The class meets 4 times a week.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 5

Point of Contact: Larry Irwin, Computer Science Dept., Ohio University, Athens, OH 45701, USA
phone: (614) 593-1246
e-mail: irwin@ouVaxa.ucls.ohiou.edu

Ohio University—Athens

Course Title: Software Design and Development

Objective(s): Teach the principles of software engineering.

Concepts:

Design Concepts	Management Overview	Object-Oriented Design
Software Engineering		

Audience:

Computer Scientists

Textbook(s): Lamb. *Software Engineering.*
Gonzalez, D. *Ada Programmer's Handbook*. Benjamin-Cummings, 1991.

Compiler(s): Vax Ada

Computer(s): PCs; Macintoshes

Schedule: The class meets 4 times a week.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 5

Point of Contact: Larry Irwin, Computer Science Dept., Ohio University, Athens, OH 45701, USA
phone: (614) 593-1246
e-mail: irwin@ouVaxa.ucls.ohiou.edu

Ohio University-Athens

Course Title: Software Engineering Project Design

Objective(s): Design the system specified in the previous course.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Object-Oriented Design	Package	Problem Solving
Real-Time Programming	Software Engineering	Tasking

Audience:

Computer Scientists

Compiler(s): Vax Ada

Computer(s): DECStation, PCs

Schedule: The class meets 4 times a week.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 5

Point of Contact: Larry Irwin, Computer Science Dept., Ohio University, Athens, OH 45701, USA
phone: (614) 593-1246
e-mail: irwin@ouVaxa.ucls.ohiou.edu

Ohio University—Athens

Course Title: Software Engineering Project Implementation

Objective(s): Implement and test the system designed in the previous course.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Compiler(s): Vax Ada

Computer(s): Macintoshes; IBM Mainframes

Schedule: The class meets 4 times a week.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 5

Point of Contact: Larry Irwin, Computer Science Dept., Ohio University, Athens, Athens, OH 45701, USA
phone: (614) 593-1246
e-mail: irwin@ouVaxa.ucls.ohiou.edu

Ohio University—Athens

Course Title: Software Engineering Project Specification

Objective(s): Study the specification of a medium-sized system (3000-6000 LOC).

Concepts:

Design Concepts	Management Overview	Object-Oriented Design
Package	Software Engineering	

Audience:

Computer Scientists

Compiler(s): Vax Ada

Computer(s): IBM MainFrame; Vax-II

Schedule: The class meets 4 times a week.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 5

Point of Contact: Larry Irwin, Computer Science Dept., Ohio University, Athens, OH 45701, USA
phone: (614) 593-1246
e-mail: irwin@ouVaxa.ucls.ohiou.edu

Otterbein College

Course Title: Programming Concepts

Objective(s): Offer an introduction to program design, coding, testing, and documentation. Includes an introduction to command language, editing, program structures, data structures, and algorithms.

Concepts:

Abstract Data Types	Design Concepts	Management Overview
Package	Problem Solving	Software Engineering
Strong Typing		

Audience:

Computer Scientists

Textbook(s): Skansholm, J. *Ada from the Beginning.* Addison-Wesley, 1988.
Robertson, et al. *Simple Program Design.* 1991.

Compiler(s): Meridian Ada

Computer(s): 386s

Schedule: The class meets 5 times a week.

Prerequisites: Introduction to Computer

Credit Hours: 5

Point of Contact: Dr. Thomas R James, Mathematics Dept. Otterbein College, Westerville, OH 43081, USA
phone: (614) 898-1724

University of Cincinnati—Raymond Walters

Course Title: Object-Oriented Design

Objective(s): Introduce seniors and first year graduate students to object-oriented design in general, emphasizing graphical object-oriented requirements, analysis and design techniques which may be used to engineer medium to large software systems.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Object-Oriented Design	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists	Engineers	Seniors grads

Textbook(s): Booch, G. *Object-Oriented Design with Applications*. Benjamin Cummings, 1991.
Budd. *An Introduction to Object-Oriented Programming*. Addison Wesley, 1991.

Compiler(s): DEC Ada on Vax 8650 running VMS

Computer(s): Vax 8650

Schedule: The class meets once a week for 10 weeks.

Prerequisites: Data structures and software engineering

Credit Hours: 3

Point of Contact: Richard Conn, University of Cincinnati—Raymond Walters, Mail Location # 30, Cincinnati, OH 45221, USA
phone: (513) 774-5491
e-mail: rconn@vlsisun.ece.uc.edu

University of Cincinnati—Raymond Walters

Course Title: Object-Oriented Programming and Languages

Objective(s): Introduce advanced students to object-oriented programming and associated languages, comparing/contrasting features of OOPLs (Ada and C++), introducing concepts of inheritance and polymorphism and writing object-oriented programs in Ada and C++.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Problem Solving
Real-Time Programming	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists	Engineers	Seniors

Textbook(s): Budd. *An Introduction to Object-Oriented Programming*. Addison Wesley, 1991.
Cox. *Object-Oriented Programming: An Evolutionary Approach*, 2nd ed. Addison Wesley, 1991.

Compiler(s): DEC Ada on Vax 8650 running VMS

Computer(s): Vax 8650

Schedule: The class meets once a week for 10 weeks.

Prerequisites: Data structures and software engineering

Credit Hours: 3

Point of Contact: Richard Conn, University of Cincinnati—Raymond Walters, Mail Location # 30, Cincinnati, OH 45221, USA
phone: (513) 774-5491
e-mail: rconn@vlsisun.ece.uc.edu

University of Cincinnati—Raymond Walters

Course Title: Software Engineering

Objective(s): Comprehend and apply the basic principles and techniques for analysis, software design, coding, and testing of an engineered system. Understand rationale for design of languages like Ada to support engineered software systems and the proper applications.

Concepts:

Abstract Data Types	Design	Exception Handling
Management Overview	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists	Engineers	Seniors
Graduates		

Textbook(s): Pressman. *Software Engineering: A Practitioner's Approach.* 3rd ed. McGraw Hill, 1991.
Booch, G. *Software Engineering with Ada.* Benjamin-Cummings, 1988. 580p. 2nd ed.

Compiler(s): DEC Ada on Vax 8650 running VMS

Computer(s): Vax 8650

Schedule: The class meets once a week for 10 weeks.

Prerequisites: Data structures

Credit Hours: 3

Point of Contact: Richard Conn, University of Cincinnati—Raymond Walters, Mail Location # 30, Cincinnati, OH 45221, USA
phone: (513) 774-5491
e-mail: rconn@vlsisun.ece.uc.edu

University of Dayton

Course Title: Algorithms and Programming I

Objective(s): Provide introduction to algorithm development, basic programming, program structure. Stresses modularity, procedural abstraction, and understanding code.

Concepts:

Package	Problem Solving	Software Engineering
Strong Typing		

Textbook(s): CPS 150 notes- Winslow

Compiler(s): Janus Ada; Vax Ada

Computer(s): PC 286

Schedule: The class meets for 15 weeks.

Prerequisites: None

Credit Hours: 4

Point of Contact: Robert K Maruyama, University of Dayton, 300 College Park, Dayton, OH 45469, USA
phone: (513) 229-3831
e-mail: maruyama@udauxb.oca.udayton.edu

University of Dayton

Course Title: Algorithms and Programming II

Objective(s): Stress abstract data types, program design, dynamic data structures.

Concepts:

Abstract Data Types	Design Concepts	Generics
Object-Oriented Design	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Mauyama and Stoehr, *Computer Science II with Ada.*
Ada Language Reference Manual

Compiler(s): Janus Ada, Vax Ada

Computer(s): PC 286; 386; 486; Vax 4000

Schedule: The class meets for 15 weeks.

Prerequisites: Algorithms and Programming I

Credit Hours: 4

Point of Contact: Robert K Maruyama, University of Dayton, 300 College Park, Dayton, OH 45469, USA
phone: (513) 229-3831
e-mail: maruyama@udauxb.oca.udayton.edu

University of Dayton

Course Title: Data Structures and Algorithms

Objective(s): Present culmination of the basic concepts of data structures and algorithms. The topics include trees, graphs, sorting,and searching in greater depth.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Textbook(s): Winslow. *Data Structures.*
Ada Language Reference Manual

Compiler(s): Janus Ada; Vax Ada

Computer(s): PC 286; 386; 486; Vax 4000

Schedule: The class meets for 15 weeks.

Prerequisites: Programming I and II

Credit Hours: 3

Point of Contact: Robert K Maruyama, University of Dayton, 300 College Park, Dayton, OH 45469, USA
phone: (513) 229-3831
e-mail: maruyama@udauxb.oca.udayton.edu

Wright State University

Course Title: Introduction to Data Base Management Systems

Objective(s): Present a survey of logical and physical aspects of database management systems. Hierarchical, network, and relational models of a database are presented. Physical implementations are discussed.

Concepts:

Abstract Data Types	Design Concepts	Object-Oriented Design
Problem Solving		

Audience:

Computer Scientists	Engineers

Textbook(s): Elmarsi. *Fundamental of Database Systems*. Addison Wesley, 1989.

Compiler(s): Verdix Ada 6.0; Pascal; C

Computer(s): Network workstations

Schedule: The class meets twice a week for 11 weeks.

Prerequisites: 400 level

Credit Hours: 4

Point of Contact: Chris Fickert, Dept. of Computer Science & Engineering, Wright State University, 3640 Colonel Glenn Highway, Dayton, OH 45435, USA
phone: (513) 873-2491
e-mail: cfickert@cs.wright.edu

Wright State University

Course Title: Introduction to Ada Programming

Objective(s): Provide an introduction to computer programming with Ada language relative to the software engineering environment.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Analysts	Computer Scientists	Managers

Textbook(s): Pokrass, D. and G. Bray. *Understanding Ada: A Software Engineering Approach*. Wiley, 1985.

Compiler(s): Verdix Ada 6.0

Computer(s): Network workstations

Schedule: The class meets twice a week for 11 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: Chris Fickert, Dept. of Computer Science & Engineering, Wright State University, 3640 Colonel Glenn Highway, Dayton, OH 45435, USA
phone: (513) 873-2491
e-mail: cfickert@cs.wright.edu

Wright State University

Course Title: Introduction to Software Engineering

Objective(s): Study and understand concepts of software engineering. Includes analysis, design, and implementation of software engineering concepts using structured programming and design. To illustrate software life-cycles through case studies.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	

Audience:

Computer Scientists	Engineers

Textbook(s): Ivan. *Software Engineering*. 3rd ed. Addison Wesley, 1988.
Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988. 2nd ed.

Compiler(s): Verdix Ada 6.0

Computer(s): Unix; Verdix Ada

Schedule: The class meets twice a week for 11 weeks.

Prerequisites: 400 level

Credit Hours: 4

Point of Contact: Chris Fickert, Dept. of Computer Science & Engineering, Wright State University, 3640 Colonel Glenn Highway, Dayton, OH 45435, USA
phone: (513) 873-2491
e-mail: cfickert@cs.wright.edu

East Central University

Course Title: Programming in Ada

Objective(s): Teach syntax, tasking, and ADT.

Concepts:

Abstract Data Types	Design Concepts	Generics
Package	Problem Solving	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988. 2nd ed.

Compiler(s): Alsys

Computer(s): Altos 5000 Unix

Schedule: The class meets for 16 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Bill Walker, Dept. of Computer Science, East Central University, Ada, OK 74820, USA
phone: (405) 332-8000
e-mail: bw@cs.ecok.edu

Langston University

Course Title: Computer Programming in Ada

Objective(s): Teach programming writing in Ada.

Concepts:

Abstract Data Types	Design Concepts	Management Overview
Object-Oriented Design	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Juniors   Seniors

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Nsite Ada

Computer(s): IBM compatible

Schedule: The class meets 5 times a week for 5 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. In Hai Ro, Langston University, Langston, OK 73050, USA
phone: (405) 466-2231

Northwestern Oklahoma State University

Course Title: Programming in Ada

Objective(s): Teach Ada programming structure on an introductory level.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Real-Time Programming	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Shumate, K. *Understanding Ada*. HarperCollins, 1974.

Computer(s): Vax 4000

Schedule: The class meets twice a week for 16 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 2

Point of Contact: Susan Weidenmaier, Northwestern Oklahoma State University, Alva, OK 73717, USA
phone: (405) 327-1700

Oklahoma Christian University

Course Title: Ada Programming

Objective(s): Teach the fundamentals of Ada programming and its application to problem solving.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Texel, P. *Introduction to Ada. Packages for Programmers.* Wadsworth Press, 1986.
Advanced Ada: Packages for Programming-Wadsworth. 1986.

Compiler(s): Vax Ada

Computer(s): MicroVax 3400; At&t 364000; ps/2

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 2

Point of Contact: Don Leftwich, Oklahoma Christian University, Box 11000, Oklahoma City, OK 73136-1100,
USA
phone: (405) 425-5413

Oklahoma City University

Course Title: Ada

Objective(s): Offer a study of structured programming using Ada. Intended for incoming masters students with limited programming experience.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Feldman, M. B. and Koffman, E. B. *Ada Problem Solving and Program Design*. Addison-Wesley, 1991.

Compiler(s): Vax Ada

Computer(s): PC Clones; Vax 8250

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: L F Sells, Dept. of Computer Science, Oklahoma City University, 2501 N. Blackwelder Avenue, Oklahoma City, OK 73106, USA
phone: (405) 521-5027
e-mail: larry@okcu

Oklahoma City University

Course Title: Programming I, II

Objective(s): Present a study of the principles and techniques of algorithm development and computer programming.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Tremblay, J., et al. *Programming in Ada.* McGraw-Hill, 1990.
Feldman, M. B. and Koffman, E. B. *Ada Problem Solving and Program Design.* Addison-Wesley, 1991.

Compiler(s): Vax Ada

Computer(s): MicroVax-II; PC Clones

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: L F Sells, Dept. of Computer Science, Oklahoma City University, 2501 N. Blackwelder Avenue, Oklahoma City, OK 73106, USA
phone: (405) 521-5027
e-mail: larry@okcu

Oklahoma City University

Course Title: Structures of Programming Languages

Objective(s): Offer an examination of modern high level programming languages from the perspective of structures, syntax, semantics, and grammar.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Naiditch, David. *Rendezvous with Ada: A Programmer's Introduction*. John Wiley and Sons, 1989. Appleby. *Programming Languages*.

Compiler(s): Vax Ada

Computer(s): Vax 8250; MicroVax-II

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; two courses

Credit Hours: 3

Point of Contact: L F Sells, Dept. of Computer Science, Oklahoma City University, 2501 N. Blackwelder Avenue, Oklahoma City, OK 73106, USA
phone: (405) 521-5027
e-mail: larry@okcu

Oklahoma State University

Course Title: Ada Programming

Objective(s): Introduce students familiar with a programming language to the new features of Ada and how these features support software structure.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Strong Typing	Tasking

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): DEC

Computer(s): Vax

Schedule: The class meets for 16 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 2

Point of Contact: K M George or Faisel Saeed, Oklahoma State University, Stillwater, OK 74078, USA
phone: (405) 744-5221
e-mail: kmg@a.cs.okstate.edu or saeed@a.cs.okstate.edu

University of Central Oklahoma

Course Title: Programming I (Ada)

Objective(s): Cover the syntax and semantics of all of the Ada statements.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Problem Solving	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Vax Ada

Computer(s): Vax

Schedule: The class meets 3 times a week for 18 weeks.

Prerequisites: None

Credit Hours: 2

Point of Contact: Bill McDaniel, University of Central Oklahoma, 100 North University Street, Edmond, OK 73034, USA
phone: (405) 341-2980

Portland State University

Course Title: Ada and Data Abstraction

Objective(s): Provide basic and advanced concepts of data abstraction, encapsulation, modularization, and reuse. Design goals and program development are addressed using the Ada language and the Anna toolset.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists	Engineers

Textbook(s): Gehani, N. *Ada: An Advanced Introduction*, 2nd ed. Prentice-Hall, 1989.
Luckham. *Programming with Specifications*. Springer Verlag, 1990.

Compiler(s): Verdix

Computer(s): Sun-4

Schedule: The class meets for 10 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Sergio Antoy, Dept. of Computer Science, Portland State University, P.O. Box 751, Portland, OR 97207, USA
phone: (503) 725-3009
e-mail: antoy@cs.pdx.edu

Beaver College

Course Title: Modern Programming Languages—Ada

Objective(s): Teach Ada concepts.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Problem Solving	Real-Time Programming	Software Engineering

Audience:

Computer Scientists

Compiler(s): DEC Ada on Vax

Computer(s): Vax 84

Schedule: The class meets once a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Rick Arras, Beaver College, Glenside, PA 19038, USA
phone: (717) 572-2142, ext 717

Cheyney University of Pennsylvania

Course Title: Software Engineering Using Ada

Objective(s): Teach the principle of software engineering using the Ada language as a tool that espouses the
concepts of software engineering.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Ghezzi. *Fundamentals of Software Engineering*. Prentice-Hall, 1991.
Watt. *Ada Language and Methodology*. Prentice-Hall, 1987.

Compiler(s): Meridian Ada Vantage

Computer(s): IBM ps/2 Model 30

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Jesse Williams, Cheyney University, P.O. Box 131, Cheyney, PA 193190131, USA
phone: (215) 399-2323

Clearing University

Course Title: Software Engineering Using Ada

Objective(s): Teach the basics of software engineering using the Ada programming language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*, 2nd ed. Benjamin-Cummings, 1988.
Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): DEC Ada on Vax VMS

Computer(s): Vax, IBM PC

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; Data Structures

Credit Hours: 3

Point of Contact: J B Wyatt, CIS Dept., Clearing University, G-25 Becker, Clarion, PA 16214, USA
phone: (814) 226-2442

Indiana University of Pennsylvania

Course Title: Software Development with Ada

Objective(s): Provide an introduction to Ada programming and as a tool for software engineering.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Strong Typing
Tasking		

Audience:

Students

Textbook(s): Naiditch, David. *Rendezvous with Ada: A Programmer's Introduction*. John Wiley and Sons, 1989.

Compiler(s): DEC Ada on Vax

Computer(s): IBM compatibles

Schedule: The class meets twice a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Dr. McCalvie, Computer Science Dept., Indiana University of Pennsylvania, 205 Church Avenue, Indiana, PA 15701, USA
phone: (412) 357-7994
e-mail: lnewxab@iup

Juniata College

Course Title: Programming Languages

Objective(s): Study and analyze various types of programming languages. Procedural, functional, and logical languages are covered.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	

Audience:

Computer Scientists

Textbook(s): MacClennan. *Principles of Programming Languages.*

Compiler(s): Vax II Ada

Computer(s): Vax II 780; Sun-3 workstations

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Loren Rhodes, Juniata College, 1700 Moore Street, Huntingdon, PA 16652, USA
phone: (814) 643-4310
e-mail: rhodes@juncol.juniata.edu

Pennsylvania State University—Harrisburg

Course Title: Ada for Business Applications

Objective(s): Offer an introduction to Ada with program design in a business application environment.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Software Engineering
Strong Typing		

Audience:

Analysts	Computer Scientists	Engineers
Managers	students	

Textbook(s): Shumate, K.C. *Understanding Ada: With Abstract Data Types*, 2nd ed. Wiley, 1989.

Compiler(s): IBM Ada

Computer(s): IBM ES/3090-600S

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; pascal or Cobol

Credit Hours: 3

Point of Contact: M Susan Richman, Pennsylvania State University—Harrisburg, 777 West Harrisburg Pike,
Middletown, PA 17057-4898, USA
phone: (717) 948-6082
e-mail: msr1@psuvm.psu.edu

Pennsylvania State University—Harrisburg

Course Title: Advanced Ada Programming Language

Objective(s): Acquire facility with the advanced features of Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Analysts	Computer Scientists	Engineers
students		

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.
Ada Language Reference Manual

Compiler(s): IBM Ada

Computer(s): IBM ES/3090-600S

Schedule: The class meets for 15 weeks.

Prerequisites: Introduction to Ada and Programming

Credit Hours: 3

Point of Contact: M Susan Richman, Pennsylvania State University—Harrisburg, 777 West Harrisburg Pike,
Middletown, PA 17057-4898, USA
e-mail: msr1@psuvm.psu.edu

Pennsylvania State University—Harrisburg

Course Title: Data Structures/CSC 410

Objective(s): Learn data structures with Ada as the implementation language.

Concepts:

Abstract Data Types	Design Concepts	Generics
Object-Oriented Design	Package	Problem Solving

Audience:

Computer Scientists   Students

Textbook(s): Feldman, M. B. *Data Structures with Ada*. Prentice-Hall, 1985.
Ada Language Reference Manual

Compiler(s): IBM Ada

Computer(s): IBM ES/3090-600S

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; Ada or pascal

Credit Hours: 3

Point of Contact: M Susan Richman, Pennsylvania State University—Harrisburg, 777 West Harrisburg Pike,
Middletown, PA 17057-4898, USA
e-mail: msr1@psuvm.psu.edu

Pennsylvania State University—Harrisburg

Course Title: Introductory Ada and Program Design

Objective(s): Teach all Ada features (except tasking and low level I/O) in accordance with software engineering design principles.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Analysts	Computer Scientists	Engineers
students		

Textbook(s): Shumate, K.C. *Understanding Ada: With Abstract Data Types*, 2nd ed. Wiley, 1989.

Compiler(s): IBM Ada

Computer(s): IBM ES/3090-600S

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; Pascal or C

Credit Hours: 3

Point of Contact: M Susan Richman, Pennsylvania State University—Harrisburg, 777 West Harrisburg Pike, Middletown, PA 17057-4898, USA
phone: (717) 948-6082
e-mail: msr1@psuvm.psu.edu

Shippensburg University

Course Title: Advanced Data Structures—Undergraduate

Objective(s): Examine data types - their definitions and applications. Selected applications will be made using more advanced forms of such data structures as strings, linked lists, stacks, trees,and graphs.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Strong Typing

Audience:

Computer Scientists

Textbook(s): Feldman, M. B. *Data Structures with Ada.* Prentice-Hall, 1985.

Compiler(s): Meridian Adavantage; MiPS Ada; Vax Ada

Computer(s): Clone 80X86s MiPS RISC; DEC Vax

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course; data structures

Credit Hours: 3

Point of Contact: Rick E Ruth, Mathematics and Computer Science Dept., Shippensburg University, Shippensburg, PA 17257, USA
phone: (717) 532-1431
e-mail: rer@ship.bitnet

Shippensburg University

Course Title: Data, Algorithms, and Programming

Objective(s): Consider data from classical data structures to abstract data types and files. The design and analysis of algorithms dealing with these structures will also be covered.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Booch, Grady. *Software Components With Ada Structures, Tools, and Subsystems.* Benjamin-Cummings, 1987.

Compiler(s): Meridian AdaVantage; MiPS Ada; Vax Ada

Computer(s): Clone 80X86s MiPS RISC; DEC VAX

Schedule: The class meets once a week for 15 weeks.

Prerequisites: Graduate Students

Credit Hours: 3

Point of Contact: Rick E Ruth, Mathematics and Computer Science Dept., Shippensburg University, Shippensburg, PA 17257, USA
phone: (717) 532-1431
e-mail: rer@ship.bitnet

Slippery Rock University

Course Title: Ada Programming/CP 230

Objective(s): Teach programming and concepts in Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Strong Typing	Tasking

Audience:

   Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*, 2nd ed. Benjamin-Cummings. 1988.

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Richard Hunkler, Slippery Rock University, 106 Maltby Center, Slippery Rock, PA 16057, USA
   phone: (412) 738-2137
   e-mail: rfh@sru.bitnet

University of Scranton

Course Title: Computer Science II/CSC 144

Objective(s): Develop structured programming concepts using the programming language Ada. The course emphasizes the use of data structures and modular programming.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Shumate. *Understanding Ada with Abstract Data Types*. Wiley, 1989.

Compiler(s): Vax/VMS Ada; Meridian Sun-4; Meridian ps/2-dos

Computer(s): Vax/VMS; Sun-4; IBM ps/2

Schedule: The class meets twice a week for 14 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 4

Point of Contact: Jack Beidler, Computing Sciences Dept., University of Scranton, Scranton, PA 18510, USA
phone: (717) 941-7446

Westmoreland County Community College

Course Title: Ada Programming Language

Objective(s): Analyze programming problems and be able to code, test programs and perform program maintenance.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Real-Time Programming	Tasking	

Audience:

Analysts	Computer Scientists	Engineers
Managers	Computer Technicians	

Textbook(s): Texel, P. *Introduction to Ada; Packages for Programmers.* Wadsworth Press, 1986.

Compiler(s): Janus

Computer(s): IBM PS/2

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Mario E Cecchetti, Westmoreland County Community College, Youngwood, PA 15697, USA
phone: (412) 925-4130

Bob Jones University

Course Title: Advanced Microprocessors

Objective(s): Present issues in real-time microprocessor-based system design.

Concepts:

Abstract Data Types	Exception Handling	Package
Real-Time Programming	Strong Typing	Tasking

Audience:

Engineers

Textbook(s): Lawrence and Manch. *Real Time Microcomputer System Design*. McGraw Hill, 1987.
Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Meridian Ada

Computer(s): IBM PC/AT compatible

Schedule: The class meets 3 times a week.

Prerequisites: None

Credit Hours: 3

Point of Contact: William P. Lovegrove, Bob Jones University, Box 34437, Greenville, SC 29614, USA
phone: (803) 242-5100

University of South Carolina at Spartanburg

Course Title: Ada Programming

Objective(s): Provide basic and advanced programming with problem solving utilizing structured variables, arrays, strings, linked lists, queues, and trees.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Strong Typing

Audience:

Computer Scientists

Textbook(s): Cohen, N.C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Meridian Ada Student

Computer(s): Xt; At; 356

Schedule: The class meets 2—3 times a week for 14 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Daniel J. Codespoti, Mathematics and Computer Sciences, University of South Carolina at Spartanburg, 500 University Way, Spartanburg, SC 29303, USA
phone: (803) 599-2292

Winthrop College

Course Title: Programming in the Ada Language

Objective(s): Teach the essentials of the Ada language. This is an optional 1 hour self-paced course.

Concepts:

Abstract Data Types	Generics	Object-Oriented Design
Package	Problem Solving	Software Engineering
Strong Typing		

Audience:

Analysts   Computer Scientists

Textbook(s): Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988.

Compiler(s): Data general ADE

Computer(s): Data General MV

Schedule: The class meets once a week.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 1

Point of Contact: Clark Archer, Computer Science Dept., Winthrop College, Rock Hill, SC 29733, USA
phone:

National College

Course Title: Programming with Ada

Objective(s): Introduce students to Ada programming, syntax, modularity, data objectives, etc.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Tasking	

Audience:

Computer Scientists   Juniors (CIS)

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Inter Ada

Computer(s): IBM PS2

Schedule: The class meets 4 times a week for 11 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: Gus King, 321 Kansas City Ave., Rapid City, SD 57701, USA
phone: (605) 394-4830

University of South Dakota

Course Title: Computer Science I

Objective(s): Teach Ada as a first language. Includes basic language constructs, problem solving, and software engineering.

Concepts:

Design Concepts	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Volper, D. and Katz, M. D. *Introduction to Programming Using Ada*. Prentice-Hall, 1990.

Compiler(s): Verdix (version 6)

Computer(s): Sun-3 Workstations

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: None

Credit Hours: 4

Point of Contact: Douglas Goodman, Computer Science Dept., University of South Dakota, Vermillion, SD 57069, USA
phone: (605) 677-6132
e-mail: doug@charlie.usd.edu

Memphis State University

Course Title: Programming with Ada

Objective(s): Introduce Ada to seniors and graduate students from an advanced point of view, and cover modern programming techniques.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Engineers

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.

Compiler(s): Vax VMS; Janus Ada

Computer(s): Vax VMS; PC XT Clones

Prerequisites: Successfully completed any other programming course; seniors and graduate students

Credit Hours: 3

Point of Contact: Dean Lance Smith, Dept. of Electrical Engineering, Memphis State University, Memphis, TN 38152, USA
phone: (901) 678-3253

Tennessee Technological University

Course Title: Advanced Programming

Objective(s):

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Vax Ada

Computer(s): Vax 8800

Prerequisites: Successfully completed another high-order programming course; data structure

Credit Hours: 3

Point of Contact: Donald C. Ramsey, CSC Dept., Box 5101, Tennessee Technological University, Cookeville,
TN 38505, USA
phone: (615) 372-3448
e-mail: dcr4250@tntech

University of Tennessee

Course Title: Software Engineering

Objective(s): Teach software engineering principles and illustrate them in Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Instructor's choice

Compiler(s): Vax

Computer(s): Vax

Prerequisites: Seniors

Credit Hours: 3

Point of Contact: J. H. Poore, Dept. of Computer Science, University of Tennessee, L07 Ayres Hall, Knoxville, TN 37996-1301, USA
phone: (615) 974-5067
e-mail: poore@cs.utk.edu

Amarillo College

Course Title: Advanced Algorithms and Information Structures

Objective(s): Provide an intensive study of Ada features, motivate and give examples of Ada design and programming, introduce object-oriented development using Ada and Turbo Pascal.

Concepts:

Abstract Data Types	Design Concepts	Generics
Management Overview	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.
Haiduk. *Object-Oriented Turbo Pascal*. McGraw-Hill

Compiler(s): Meridian Open Ada

Computer(s): Hewlett-Packard Vectra QS-20's

Schedule: The class meets 3 times a week.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: H. Paul Haiduk, Amarillo College, 2201 South Washington St., Amarillo, TX 79109, USA
phone: (806) 371-5239

Prairie View A & M University

Course Title: Advanced Ada

Objective(s): Use Ada concepts of software engineering and object-oriented design in large, complex software projects.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists	Juniors	Seniors

Textbook(s): Not Specified

Compiler(s): Vax Ada; Meridian-PC

Computer(s): Club 386-IBM; Compat; IBM PS2 80

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: J D Oliver, Computer Science, Prairie View A&M University, 5th Avenue A, P.O. Box 2447, Prairie View, TX , USA
phone: (409) 857-2715

Prairie View A & M University

Course Title: Structured Programming with Ada

Objective(s): Introduce students to the Ada language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Tasking		

Audience:

Computer Scientists	Juniors	Seniors

Textbook(s): Shumate, K. *Understanding Ada*, 2nd ed. Wyley.
Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.

Compiler(s): Vax Ada; Meridian-PC

Computer(s): Club 386-IBM Compat; IBM PS2 80

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: J D Oliver, Computer Science, Prairie View A&M University, 5th Avenue A, P.O. Box 2447,
Prairie View, TX , USA
phone: (409) 857-2715

Saint Edward's University

Course Title: Advanced Programming: Ada

Objective(s): Teach structured programs with Ada, including applications to scientific problems.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Sommerville, I. *Software Engineering.* Addison-Wesley, 1988,
Lamb. *Software Engineering.* Prentice-Hall

Compiler(s): Hewlett-Packard Irvine

Computer(s): Hewlett-Packard 9000/835

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Barbara Boucher Owens, St. Edward's University, 3001 S Congress Ave, Austin, TX 78704,
USA
phone: (512) 448-8667
e-mail: seu/owens@emx.utexas.edu

Sam Houston State University

Course Title: Introduction to Algorithms and Data Structures

Objective(s): Provide an introductory programming course emphasizing problem solving and program design.

Concepts:

Abstract Data Types	Package	Problem Solving

Audience:

Computer Scientists	Beginning

Textbook(s): Naiditch, David. *Rendezvous with Ada: A Programmer's Introduction*. John Wiley and Sons, 1989.

Compiler(s): Meridian Ada; Vax Ada

Computer(s): PC, Vax

Prerequisites: None

Credit Hours: 3

Point of Contact: John H. McCoy, Computer Science Dept., Sam Houston State University, P.O. Box 2206, Huntsville, TX 77341, USA
phone: (409) 294-1535

Sam Houston State University

Course Title: Programming Algorithms and Data Structures

Objective(s): Cover methods of representing relationships, return data elements and procedures for manipulating common data structures.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving

Audience:

Computer Scientists   2nd Semester

Textbook(s): Tremblay, J., et al. *Programming in Ada.* McGraw-Hill, 1990.

Prerequisites: Introduction to Ada Programming

Point of Contact: John H. McCoy, Computer Science Dept., Sam Houston State University, P.O. Box 2206, Huntsville, TX 77341, USA
phone: (409) 294-1535

Southwest Texas State University

Course Title: Survey of Computer Languages

Objective(s): Concentrate on concepts of language and illustrate them in a variety of languages.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Strong Typing
Tasking		

Audience:

Computer Science Majors

Textbook(s): Watt, D.A., et al. *Ada Language and Methodology*. Prentice-Hall, 1987.

Compiler(s): Vax VMS; DEC Ada

Computer(s): Vax cluster under VMS; 386 PC Meridian Ada

Schedule: The class meets for 14 weeks.

Prerequisites: Data structures

Credit Hours: 3

Point of Contact: Dr. Janusz Zalewski, Dept. of Computer Science, Southwest Texas State University, San Marcos, TX 78666-4616, USA
phone: (512) 245-3873
e-mail: j201@swtexas.bitnet

Texas Christian University

Course Title: Ada Design and Development

Objective(s): Provide software development using Ada programming language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.

Compiler(s): Vax Ada

Computer(s): Vax Ada

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: James R. Comer, Computer Science Dept., Texas Christian University, P.O. Box 32886, Fort Worth, TX 76129, USA
phone: (817) 921-7166
e-mail: comer@gamma.is.tcu.edu

Trinity University

Course Title: Ada Language Lab

Objective(s): Teach programming in Ada.

Concepts:

Abstract Data Types	Management Overview	Package
Real-Time Programming	Tasking	

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Meridian Ada on Macintosh

Computer(s): IBM PC; ps2; 438; Macintosh; Sun-3 and Sparc

Schedule: The class meets for 14 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 1

Point of Contact: Aaron Konstam, Trinity University, 715 Stadium Drive, San Antonio, TX 78212, USA
phone: (512) 736-7484
e-mail: akonstam@trinity.edu

University of Houston—Clear Lake

Course Title: Programming In Ada

Objective(s): Provide an introduction to the Ada programming languages, with emphasis on the systematic design of software in the Ada environments.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists   Engineers

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Meridian for PC; Vax Ada

Computer(s): Vax, PCs

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Colin Atkinson, University of Houston—Clear Lake, 2700 Bay Area Blvd., Houston, TX 77058, USA
phone: (713) 283-3878
e-mail: atkinson@cl.uh.edu

University of Houston—Downtown

Course Title: Introduction to Software Engineering

Objective(s): Provide an introduction to software engineering topics and the Ada programming language including individual and group projects.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists

Textbook(s): Sommerville, I. and R. Morrison. *Developing Large Software Systems with Ada*. Addison-Wesley, 1987.
Booch, G. *Software Engineering with Ada*, 2nd ed. Benjamin-Cummings, 1988.

Compiler(s): Telesoft Ada on Vax

Computer(s): Vax, PC, Macintosh

Schedule: The class meets twice a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Kenneth E. Oberhoff, AMS Dept., University of Houston—Downtown, 1 Main Street, Houston, TX 77002, USA
phone: (713) 221-8549
e-mail: oberhoff@uhdbit.bitnet

University of Texas—Arlington

Course Title: Software Engineering

Objective(s): Provide a study of software construction concepts, principles, and approaches.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Software Engineering
Strong Typing	Tasking	

Audience:

Computer Scientists	Engineers

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): DEC Ada

Computer(s): PCs, Vax 8800

Schedule: The class meets for 16 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Steve Hufnagel, Computer Science Engineering, University of Texas—Arlington, P.O. Box 19015, Arlington, TX 76019, USA
phone:

Weber State University

Course Title: Emerging Techniques—Ada/CS 225

Objective(s): Provide a level 1 course.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Strong Typing		

Audience:

Computer Scientists	Engineers

Textbook(s): Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988.

Compiler(s): Vax 9600

Computer(s): PC 386s; Vax 9600

Schedule: The class meets 4 times a week for 11 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: Charles Crittenden, Dept. of Computer Sciences, Weber State University, 3750 Harrison Blvd, Ogden, UT 84408, USA
phone: (801) 626-6793

Weber State University

Course Title: Advanced Problem Solving—Ada/CS 425

Objective(s): Solve lengthy advanced problems using Ada— must involve tasking, real-time, generics, and packages.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Real-Time Programming	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Compiler(s): Vax 9600

Computer(s): PC 386s; Vax 9600

Schedule: The class meets 4 times a week for 11 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 4

Point of Contact: Charles Crittenden, Dept. of Computer Sciences, Weber State University, 3750 Harrison Blvd, Ogden, UT 84408, USA
phone: (801) 626-6793

Vermont Technical College

Course Title: Advanced Ada Computer Programming

Objective(s): Study real-time applications using generics, tasking and exception handling. Includes design of software for embedded systems. Data structures, software testing and documentation.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Real-Time Programming	Software Engineering
Strong Typing	Tasking	

Audience:

Technician

Textbook(s): *Ada Language Reference Manual*
ANSI/MIL-STD-1815A

Compiler(s): JANUS/Ada

Computer(s): IBM Compatibles

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed any other programming course; introduction to Ada

Credit Hours: 3

Point of Contact: Dr. Carl Brandon, Vermont Technical College, Randolph Center, VT 05061, USA
phone: (802) 728-9947
e-mail: brandon@vscnet.bitnet

Vermont Technical College

Course Title: Introductory Ada Computer Programming

Objective(s): Provide a working knowledge of problem-solving methods, algorithm development, design and coding, debugging and documenting programs using good programming style with the Ada programming language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Object-Oriented Design	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Technician

Textbook(s): *Ada Language Reference Manual*
ANSI/MIL-STD-1815A

Compiler(s): JANUS/Ada

Computer(s): IBM Compatibles

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Dr. Carl Brandon, Vermont Technical College, Randolph Center, VT 05061, USA
phone: (802) 728-9947
e-mail: brandon@vscnet.bitnet

Christopher Newport College

Course Title: CPSC - 395 Ada

Objective(s): Present the Ada language designed from concept of software engineering and the first high level language emphasizing concurrent programming.

Concepts:

Abstract Data Types	Exception Handling	Generics
Object-Oriented Design	Package	Problem Solving
Real-Time Programming	Software Engineering	Tasking

Audience:

Computer Scientists   Engineers

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill. 1986.
Gehani, N. *Ada: Concurrent Programming*. Prentice-Hall, 1984.

Compiler(s): Telegen 2

Computer(s): Sun-4

Schedule: The class meets for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: G.R. Webb, CNC—Physics, Christopher Newport College, 50 Shoe Lane, Newport News, VA 23606, USA
phone: (804) 594-7065
e-mail: GWEBBCPCS.CNC.EDU

Hampton University

Course Title: Introduction to Ada

Objective(s): Introduce students to Ada - records, recursion, dynamic types and packages.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Computer Scientists

Textbook(s): Ada From the Beginning

Compiler(s): Vax; Meridian; Macintosh; Sun; MS DOS

Computer(s): Vax; Macintosh; PC; Sun

Schedule: The class meets for 13 weeks.

Prerequisites: Computer Science II

Credit Hours: 3

Point of Contact: Robert Willis, Dept. of Computer Science, Hampton University, 33 Apollo Drive, Hampton,
VA 23669, USA
phone: (804) 727-5902
e-mail: willis@willis.hamptonu.edu

Longwood College

Course Title: Ada and Software Engineering

Objective(s): Teach syntax and semantics of Ada and teach the basics of software engineering.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Young, S. J. *An Introduction to Ada.* John Wiley and Sons, 1985.
ANSI/MIL-STD-1815A-1983

Compiler(s): AdaVantage (Meridian)

Computer(s): PCs; Clones

Schedule: The class meets 3 times a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Robert P. Webber, Mathematics and Computer Science Dept., Longwood College, 201 High St., Farmville, VA 23901, USA
phone: (804) 395-2192
e-mail: cms168@lwcvmi.lwc.edu

Norfolk State University

Course Title: Ada Programming I and II

Objective(s): Teach Syntax and applications.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Real-Time Programming	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.
Ada Language Reference Manual

Compiler(s): Vax Ada; Meridian OpenAda; Janus OpenAda; R&R Software

Computer(s): Vax VMS; IBM 286/386

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Computer Science I and II

Credit Hours: 3

Point of Contact: George Harrison, Norfolk State University, 2401 Corprew Ave., Norfolk, VA 23504, USA
phone:

Old Dominion University

Course Title: Ada Programming

Objective(s): Teach facilities and syntax of Ada as a second language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists　　Engineers

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Verdix Ada Compiler - Beta Test Site

Computer(s): Sun Workstation

Schedule: The class meets 3 times a week for 7 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 1.5

Point of Contact: Gene Hill Price, Old Dominion University, Norfolk, VA 23529, USA
phone:

University of Richmond

Course Title: Advanced Data Structures

Objective(s): Study of analysis and implementation of data structures and their algorithms.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Vax Ada

Computer(s): Vax

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: J R Hubbard, Dept. of Computer Science, University of Richmond, Richmond, VA 23173, USA
e-mail: hubbard@newton.urich.edu

Virginia Military Institute

Course Title: Survey of Programming Language

Objective(s): Gain practical programming experience in a variety of languages with special emphasis on C and Ada. Compare these languages with regard to data types, abstraction facilities, etc.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Problem Solving	Tasking

Audience:

Computer Scientists

Textbook(s): Pratt. *Programming Languages*. 1984
Kernighan and Ritchie. *The C Programming Language*. 1988

Compiler(s): Rolm/DGC Ada Compiler (Ver3.0)

Computer(s): Data General MV 7800; PCs

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Mark J Schaefer, Dept. of Mathematics and Computer Science, Virginia Military Institute, Lexington, VA 24450, USA
phone: (703) 464-7335

Virginia Polytechnic Institute

Course Title: Comparative Languages

Objective(s): Present a study of different languages.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Object-Oriented Design	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Sebesta. *Comparative Languages.*

Computer(s): Students supply their own.

Schedule: The class meets 3 times a week for 13 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: J.A.N. Lee, Dept. of Computer Science, Virginia Polytechnic Institute, Blacksburg, VA 24061-0106, USA
phone: (703) 231-5780
e-mail: janlee@vtcs1.cs.vt.edu

Computer Sciences School at MCCDC

Course Title: Advanced Programmer Training

Objective(s): Train entry level programmers.

Compiler(s): Alsys FirstAda IBM Ada compiler vert (no longer supported)

Prerequisites: None

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Course Title: Data Systems Officer Course

Objective(s): Train entry level programmers.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Analysts	Managers	programmer

Textbook(s): Skansholm J. *Ada from the Beginning*. Addison-Wesley. 1988

Compiler(s): Alsys FirstAda; IBM Ada compiler vert (no longer supported)

Computer(s): Unisys 386; IBM

Schedule: The class meets 5 times a week for 8 weeks.

Prerequisites: Successfully completed any other programming course

Point of Contact: SSgt Randall Reeves, Marine Corps Combat Development Command, Quantico, VA 22134, USA
phone: (703) 640-2962

Computer Sciences School at MCCDC

Course Title: Entry Level Programmers Course

Objective(s): Train entry level programmers.

Compiler(s): Alsys FirstAda; IBM Ada compiler vert (no longer supported)

Computer(s): Unisys 386; IBM

Schedule: The class meets 5 times a week for 8 weeks.

Prerequisites: None

Point of Contact: SSgt Randall Reeves, Marine Corps Cmbt Development Cmnd, Quantico, VA 22134, USA
phone: (703) 640-2962

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Course Title: Programmers Course

Objective(s): Teach computer scientists with 2 years of high order programming (other than Ada), programming in Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Alsys FirstAda IBM Ada compiler vert (no longer supported)

Computer(s): Unisys 386, IBM

Schedule: The class meets 5 times a week for 8 weeks.

Prerequisites: Successfully completed another high-order programming course

Point of Contact: Captain Andy Nelson, Marine Corps Cmbt Development Cmnd, Quantico, VA 22134, USAphone: (703) 640-2962

HFSI Education Department

Course Title: Ada for Managers/AD 100

Objective(s): Identify concepts and issues involved in the administration of an Ada project. It presents the management strategy and concerns for convening an application to the Ada overview of language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Software Engineering	Strong Typing
Tasking		

Audience:

Managers

Schedule: The class meets once a week.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

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Course Title: Ada for Project Managers/AD 110

Objective(s): Represent a detailed overview of software engineering goals and principles, software life cycle steps, object-oriented design, configuration management techniques and implementation and testing using appropriate tools.

Concepts:

Design Concepts	Management Overview	Object-Oriented Design
Problem Solving	Real-Time Programming	

Audience:

Analysts	Engineers	Managers

Schedule: The class meets 5 times a week.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Point of Contact: Willie Griffin, Education Dept., HFSI, 1861 Wiehle Ave., Reston, VA 22090, USA
          phone: (703) 478-2109
          e-mail: wgriffin

HFSI Education Department

Course Title: Ada Programming Concepts/AD 120

Objective(s): Provide the evaluation of the Ada language and the goals and principles of software engineering. It introduces Ada syntax, program units, data typing and how to use the Ada Language Reference Manual.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Real-Time Programming	Software Engineering	Strong Typing
Tasking		

Audience:

Analysts	Computer Scientists	Engineers

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Telesoft Ada computer

Computer(s): WIS Workstation

Schedule: The class meets 5 times a week.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Point of Contact: Willie Griffin, Education Dept., HFSI, 1861 Wiehle Ave., Reston, VA 22090, USA
phone: (703) 478-2109
e-mail: wgriffin

HFSI Education Department

Course Title: Ada Application Programming/AD 130

Objective(s): Provide for the application of software engineering goals and principles. It covers the specifications and needing of scalar and composite types, input and output functions, traditional programming concepts and error handling.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Package	Problem Solving	Software Engineering
Strong Typing		

Audience:

Analysts	Computer Scientists	Engineers

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Telesoft Ada Computer

Computer(s): WIS Workstation

Schedule: The class meets 10 times a week.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Point of Contact: Willie Griffin, Education Dept., HFSI, 1861 Wiehle Ave., Reston, VA 22090, USA
phone: (703) 478-2109
e-mail: wgriffin

HFSI Education Department

Course Title: Ada Software Applied Design/AD 140

Objective(s): Provide a study of the software life cycle with emphasis on the design phase. Software engineering, goals and principles are emphasized as well as the steps involved in object-oriented design.

Concepts:

Design Concepts	Object-Oriented Design	Problem Solving
Software Engineering		

Audience:

Analysts	Computer Scientists	Engineers

Schedule: The class meets 5 times a week.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Point of Contact: Willie Griffin, Education Dept., HFSI, 1861 Wiehle Ave., Reston, VA 22090, USA
phone: (703) 478-2109
e-mail: wgriffin

HFSI Education Department

Course Title: Advanced Ada Programming/AD 150

Objective(s): Provide for the design, oncode and test of Ada programs using advanced Ada features, such as, generic and task program units, subtypes and derived access and private types.

Concepts:

Design Concepts	Exception Handling	Generics
Package	Software Engineering	Strong Typing
Tasking		

Audience:

Analysts	Computer Scientists	Engineers

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Telesoft Ada compiler

Computer(s): WIS Workstation

Schedule: The class meets 15 times a week.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Point of Contact: Willie Griffin, Education Dept., HFSI, 1861 Wiehle Ave., Reston, VA 22090, USA
phone: (703) 478-2109
e-mail: wgriffin

HFSI Education Department

Course Title: Ada Programming Tools/AD 160

Objective(s): Provide for the development of an Ada system using different tools such as debugger, optimizer.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Analysts	Computer Scientists	Engineers

Compiler(s): Telesoft Ada compiler

Computer(s): WIS Workstation

Schedule: The class meets 5 times a week.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Point of Contact: Willie Griffin, Education Dept., HFSI, 1861 Wiehle Ave., Reston, VA 22090, USA
phone: (703) 478-2109
e-mail: wgriffin

HFSI Education Department

Course Title: Ada Programming/AD 220

Objective(s): Emphasize the software engineering goals and principles as they apply to Ada. It covers Ada programming fundamentals and conventions, data types and objects, program units and control structures.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Package	Software Engineering	Strong Typing

Audience:

Analysts	Computer Scientists	Engineers

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Telesoft Ada compiler

Computer(s): WIS Workstation

Schedule: The class meets 10 times a week.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Point of Contact: Willie Griffin, Education Dept., HFSI, 1861 Wiehle Ave., Reston, VA 22090, USA
phone: (703) 478-2109
e-mail: wgriffin

HFSI Education Department

Course Title: Advanced Ada Programming/AD 230

Objective(s): Provide for developing, coding, compiling, and executing Ada Programs which include exception handlers, tasks, access types, and generics.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Analysts	Computer Scientists	Engineers

Textbook(s): Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986.

Compiler(s): Telesoft Ada compiler

Computer(s): WIS Workstation

Schedule: The class meets 10 times a week.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course

Point of Contact: Willie Griffin, Education Dept., HFSI, 1861 Wiehle Ave., Reston, VA 22090, USA
phone: (703) 478-2109
e-mail: wgriffin

Central Washington University

Course Title: Advanced Programming in Ada

Objective(s): Teach large-scale program design and development with software engineering principles at the senior level.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.
Booch, Grady. *Software Components With Ada Structures, Tools, and Subsystems*. Benjamin-Cummings, 1987.

Compiler(s): Telesoft, Janus

Computer(s): Vax, IBM Compats

Schedule: The class meets 4 times a week for 10 weeks.

Prerequisites: Successfully completed another high-order programming course; Data (Pomerantz)

Credit Hours: 4

Point of Contact: Calvin Willberg, Central Washington University, Ellensburg, WA 98926, USA
phone:

University of Washington

Course Title: Computer Programming I

Objective(s): Computer programming in Ada, emphasize algorithmics (variables, expressions, statements, exceptions), Abstraction, and analysis (correctness, efficiency, numerics). Includes program design, coding, testing and debugging.

Concepts:

Design Concepts	Exception Handling	Generics
Package	Problem Solving	Strong Typing

Audience:

Computer Scientists	Engineers

Textbook(s): Feldman, M. B. and Koffman, E. B. *Ada Problem Solving and Program Design*. Addison-Wesley, 1991.

Compiler(s): Alsys Ada; DEC Ada; Meridian OpenAda

Computer(s): DEC stations 5000 Ultrix

Schedule: The class meets 4 times a week for 10 weeks.

Prerequisites: none

Credit Hours: 4

Point of Contact: Richard E. Pattis, Dept. of Computer Science and Engineering, MS: FR-35, University of Washington, 4547 4th Ave NW, Seattle, WA 98195, USA
phone: (206) 685-1218
e-mail: pattis@cs.washington.edu

University of Washington

Course Title: Computer Programming II

Objective(s): Provide intermediate programming (recursion, access types); specify ADTs (stacks, queues, tables, graphs) implemented via generic packages with private types (records, arrays, lists, trees, hashing). Programming via software components.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists   Engineers

Textbook(s): Feldman, M. B. *Data Structures with Ada*. Prentice-Hall, 1985.

Compiler(s): Alsys Ada; DEC Ada; Meridian OpenAda

Computer(s): DEC stations 5000 Ultrix

Schedule: The class meets 4 times a week for 10 weeks.

Prerequisites: Computer programming I

Credit Hours: 5

Point of Contact: Richard E. Pattis, Dept. of Computer Science and Engineering, MS: FR-35, University of Washington, 4547 4th Ave NW, Seattle, WA 98195, USA
phone: (206) 685-1218
e-mail: pattis@cs.washington.edu

Western Washington University

Course Title: Programming Language Lab

Objective(s): Bring students to a point where they can write and understand programs in Ada.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.

Compiler(s): Vax VMS-Digital 4000

Computer(s): Vax VMS-Digital 4000

Schedule: The class meets 3 times a week for 10 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 3

Point of Contact: Prof. Saim Yural, Computer Science Dept., Western Washington University, MS 9062, Bellingham, WA 98225, USA
phone: (206) 647-4840
e-mail: yural@wwu.edu

Jackson Software Engineering

Course Title: Ada Orientation for Managers

Objective(s): Provide transitioning to Ada technology and managed software engineering environments. Risk assessment, process assessment and improvement, cost and ROI analysis.

Concepts:

Management Overview

Audience:

Managers

Prerequisites: None

***

Course Title: Ada Programming with Object-Oriented Design—Part 1

Objective(s): Introduce programmers to Ada as a packaging technology and object-based programming language. Introduction to principles of software engineering and software development process.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Object-Oriented Design	Package	Real-Time Programming
Strong Typing		

Audience:

Analysts	Computer Scientists	Engineers
Managers		

Prerequisites: None

Point of Contact: Monty Jackson, Jackson Software Engineering, 13362 SE 232nd Pl., Kent, WA 98042-3237, USA
phone: (206) 639-1039

Jackson Software Engineering

Course Title: Ada Programming with Object-Oriented Design—Part 2

Objective(s): Design reusable code with Ada generics. Includes advanced exception handling and advanced data abstraction.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Analysts	Computer Scientists	Engineers
Managers		

Prerequisites: None

***

Course Title: Ada Programming with Object-Oriented Design—Part 3

Objective(s): Perform rate montonic analysis on real time, embedded systems. Advanced Ada tasking, advanced reuse, software process and inspections. Real-time, embedded programming.

Concepts:

Design Concepts	Exception Handling	Generics
Object-Oriented Design	Package	Problem Solving
Real-Time Programming	Software Engineering	Tasking

Audience:

Analysts	Computer Scientists	Engineers
Managers		

Prerequisites: None

Point of Contact: Monty Jackson, Jackson Software Engineering, 13362 SE 232nd Pl., Kent, WA 98042-3237, USA
phone: (206) 639-1039

Jackson Software Engineering

Course Title: Software Engineering in Ada

Objective(s): Develop Ada software in professional engineering teams. Lifecycles, software maintenance, developing software with graphical techniques, customizes to your CASE tool set.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Object-Oriented Design
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Prerequisites: None

Point of Contact: Monty Jackson, Jackson Software Engineering, 13362 SE 232nd Pl., Kent, WA 98042-3237, USA
phone: (206) 639-1039

Alderson-Broaddus College

Course Title: Computer Languages/CS 271

Objective(s): Provide problem-solving techniques using Ada programming language.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Strong Typing	

Audience:

Computer Scientists

Textbook(s): Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988.

Compiler(s): DEC Vax Ada/onsite pac-Meridian

Computer(s): Vax/IBM PS/2

Schedule: The class meets 3 times a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Gary Schubert, Alderson-Broaddus College, Philippi, WV 26416, USA
phone: (304) 457-1700

The College of West Virginia

Course Title: Data Structures

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Software Engineering	
Strong Typing		

Audience:

Computer Scientists

Textbook(s): Feldman, M. B. *Data Structures with Ada*. Prentice-Hall, 1985.

Compiler(s): Meridian Ada Vantage IBM Ada/370 compiler

Computer(s): Zenith 248; IBM Ps2/50; IBM 9370

Schedule: The class meets twice a week for 16 weeks.

Prerequisites: Computer Science II; Ada

Credit Hours: 3

Point of Contact: Stephanie Ketz, The College of West Virginia, P.O. Box AG, Beckley, WV 25801, USA
phone: (304) 253-7351

Fairmont State College

Course Title: Selected Advanced Topics

Objective(s): Familiarize students with Ada. Offer some experience in using it.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Problem Solving	Real-Time Programming
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Watt, D.A., et al. *Ada Language and Methodology.* Prentice-Hall, 1987.

Compiler(s): DEC

Computer(s): Vax

Schedule: The class meets 3 times a week for 17 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course; Data Structures

Credit Hours: 3

Point of Contact: Randy Baker, Fairmont State College, Locust Ave, Fairmont, WV 26554, USA
phone: (304) 367-4261

Marion County Technical Center

Course Title: Programming III, Programming IV

Objective(s): Presents an introduction to the Ada programming language emphasizing use of packages and procedures/function; generics.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Technician

Computer(s): IBM PS2

Schedule: The class meets for 6 weeks.

Prerequisites: Successfully completed any other programming course

Credit Hours: 45

Point of Contact: Guy Baroni, Marion County Technical Center, Rt. 1 Box 100A, Farmington, WV 26571, USA
phone: (304) 986-3590

University of West Virginia—Graduate Studies

Course Title: Introduction to Ada Programming

Objective(s): Introduce the students (assumed to know high-level programming languages) to Ada. Intended as a basis for IS 625, Software Engineering in Ada.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Software Engineering	Strong Typing

Audience:

Computer Scientists

Textbook(s): Barnes, J. *Programming in Ada*, 3rd ed. Addison-Wesley, 1989.
ANSI/MIL-STD

Compiler(s): Vax - Meridian

Computer(s): Vax; PCs

Schedule: The class meets once a week for 15 weeks.

Prerequisites: Successfully completed another high-order programming course

Credit Hours: 3

Point of Contact: Robert Hutton, P.O. Box 1003, Institute, WV 25112, USA
phone: (304) 766-2037
e-mail: ucoga@wvnvm

University of West Virginia—Graduate Studies

Course Title: Software Engineering in Ada/IS 625

Objective(s): Teach all software engineering concepts. Object-oriented design intended to raise the consciousness level in software engineering concepts.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.

Compiler(s): Vax - Meridian

Computer(s): Vax, PCs

Schedule: The class meets once a week for 15 weeks.

Prerequisites: IS 525

Credit Hours: 3

Point of Contact: Robert Hutton, P.O. Box 1003, Institute, WV 25112, USA
phone: (304) 766-2037
e-mail: ucoga@wvnvm

West Virginia University

Course Title: Introduction to Ada I, II, III.

Objective(s): Provide introduction to Ada, and software engineering and data structures.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Package	Problem Solving
Software Engineering	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988.

Compiler(s): DEC Ada Compiler

Computer(s): Macintoshes; IBM Clones

Schedule: The class meets 4 times a week.

Prerequisites: None

Credit Hours: 12

Point of Contact: John Atkins, West Virginia University, 305 Knapp Hall, Morgantown, WV 26506, USA
phone: (304) 293-3607
e-mail: atkins@a.cs.wvu.wvnrt.edu

Wheeling Jesuit College

Course Title: Software Engineering with Ada

Objective(s): Teach good software engineering practices, using Ada as the medium.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Management Overview	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Analysts	Computer Scientists	Engineers
Managers	anything	

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988.

Compiler(s): Vax Ada

Computer(s): IBM PC (PS/2); AT&T; 386SX/EL WGS

Schedule: The class meets twice a week for 14 weeks.

Prerequisites: Successfully completed another high-order programming course; Data Structures

Credit Hours: 3

Point of Contact: Margaret S. Geroch, Dept. of Computer Science, Wheeling Jesuit College, 316 Washington Avenue, Wheeling, WV 26003, USA
phone: (304) 243-2340
e-mail: 05360012@wvnvms.wvner.edu

University of Wisconsin—Platteville

Course Title: Special Topics

Objective(s): Learn Ada programming language and its uses in software engineering.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing
Tasking		

Audience:

Computer Scientists   Engineers

Textbook(s): Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 2nd ed. 1988.

Compiler(s): Vax Ada

Computer(s): Vax 8300; Vax 8350

Schedule: The class meets twice a week for 8 weeks.

Prerequisites: Successfully completed any other programming course; Successfully completed another high-order programming course; data structures

Credit Hours: 3

Point of Contact: Joe Clifton, University of Wisconsin—Platteville, 1 University Plaza, Platteville, WI 53818, USA
phone: (608) 342-1559
e-mail: clifton@uwplatt.edu

University of Wisconsin—Stout

Course Title: Software Engineering

Objective(s): Design techniques for Real Time systems.

Concepts:

Abstract Data Types	Design Concepts	Exception Handling
Generics	Object-Oriented Design	Package
Problem Solving	Software Engineering	Strong Typing

Audience:

Computer Scientists

Textbook(s): Booch, G. *Software Engineering with Ada*, 2nd ed. Benjamin-Cummings, 1988.
Nielsen, Kjell and Shumate, K. *Designing Large Realtime Systems with Ada*. McGraw-Hill, 1988.

Compiler(s): Meridian Ada

Computer(s): PC (Zenith) 286; IBM RS6000

Schedule: The class meets 3 times a week.

Prerequisites: Data structures

Credit Hours: 3

Point of Contact: Barbara Hilden, University of Wisconsin—Stout, Harvey Hall 21DL, Menomonie, WI 54751,
USA
phone: (715) 232-5002
e-mail: hilden@uwstout.bitnet

University of Wyoming

Course Title: Ada

Objective(s): Teach syntax and concepts beyond those found in Pascal using examples and exercises.

Concepts:

Abstract Data Types	Exception Handling	Generics
Package	Strong Typing	Tasking

Audience:

Computer Scientists

Textbook(s): Gehani, N. *Ada: An Advanced Introduction Including Reference Manual for the Ada Programming Language*. Prentice-Hall, 1984.

Compiler(s): Janus Ada; DEC/VMS Ada; Verdix Ada (Unix Version)

Computer(s): DEC Vax/VMS; DECStation; VaxStation; IBM-Camp. 386

Schedule: The class meets 15 times a week.

Prerequisites: Successfully completed another high-order programming course; Pascal course

Credit Hours: 1

Point of Contact: Henry Bauer, Computer Science Dept. University of Wyoming, P.O. Box 3682, Laramie, WY 82071, USA
phone: (307) 766-4827
e-mail: bauer@corral.uwyo.edu

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Ada BOOKS

This flyer is intended to be a comprehensive listing of books that have been published related to the Ada programming language. Abstracts are provided for those books that are part of the Ada Joint Program Office library.

If you know of other Ada-related books that have been published, please contact the AdaIC at 1/800-Ada-IC11 so that we can add those books to this listing.

ALPHABETICAL LIST (BY AUTHOR)

Andrews, E., editors. *Concurrent Programming with Ada.* Benjamin-Cummings, Date not set. (ISBN: 0-8053-0088-0; $19.16/paper text edition)

Atkinson, C., et al. Ada for Distributed Systems.(Ada Companion Series).Cambridge University Press, 1988. 147p.(ISBN: 0-521-36154-0; $39.50)

Describes the final report of the DIstributed Ada DEMonstrated DIADEM project, which studied the problems and developed solutions for using Ada to program real-time, distributed control systems. Demonstrates new techniques for controlling such systems from a distributed Ada program.

Ausnit, C.N. et al. *Ada in Practice.* (Professional Computing Series) Springer-Verlag, 1985. 195p.(ISBN: 0-521-36154-0; $32.50)

Identifies and resolves issues related to Ada usage and promotes effective use of Ada in general programming, design practice, and in embedded computer systems. Contains 15 case studies that cover five general areas of the Ada language: naming conventions, types, coding paradigms, exceptions, and program structure.

Baker, L. *Artificial Intelligence with Ada.* McGraw-Hill, 1989. 361p.(ISBN: 0-07-003350-1; $39.95)

Presents approximately 8,000 lines of full coding in Ada along with functions, which include backward-chaining expert systems shells, forward chaining expert systems shells, and an ATN natural language parser. Discusses the code for implementing each program and illustrates each by one or more examples.

Barnes, J. *Programming in Ada.* 2nd edition, Addison-Wesley, 1983. (ISBN: 0-201-13799-2; $25.95/paper)

Barnes, J. *Programming in Ada.* (3rd edition). Addison-Wesley, 1989. 494p.(ISBN: 0-201-17566-5; $32.25)

Discusses Ada using a tutorial style with numerous examples and exercises. Assumes readers have some knowledge of the principles of programming. Covers the following: Ada concepts, lexical style, scalar types, control structures, composite type, subprogram, overall structures, private types, exceptions, advanced types, numerics types, generics, taskings, external interfaces.

Baum, J. *The Calculating Passion of Ada Byron.* Archon Books, 1986. 133p. (ISBN: 0-208-02119-1; $23.50)

Details the life of Ada Byron, her training in mathematics, her tumultuous relationship with her mother and her contribution to the study of science.

Berzins, V. and Luqi, *Software Engineering with Abstractions.* Addison-Wesley, 1991. (ISBN: 0-201-08004-4).

Biggerstaff, T.J., and Perlis, A.J., editors. *Software Reusability Concepts and Models,* Vol. 1, Concepts and Models. ACM Press, 1989. (ISBN: 0-201-08017-6)

Biggerstaff, T.J., and Perlis, A.J., editors. *Software Reusability Concepts and Models,* Vol. 2, Applications and Experience. ACM Press, 1989. (ISBN: 0-201-50018-3)

AdaIC, c/o IIT Research Institute, 4600 Forbes Boulevard, Lanham, MD 20706-4320; 800-AdaIC-11, 703/685-1477, FAX 703/685-7019
IIT Research Institute operates the Ada Information Clearinghouse for the Ada Joint Program Office.

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ADABOOKS.HLP

Bjoerner, D. and Oest, O. N. *Towards a Formal Descrip-tion of Ada*. (Lecture Notes in Computer Sci-ence). Springer-Verlag, 1980. 630p.(ISBN: 0-387-10283-3;$31.00/Trade)

Describes the Ada programming language, dis-cusses compiler development, and provides a formal definition of Ada.

Booch, G. *Software Engineering with Ada*. Benjamin-Cummings, 1988. 580p. 2nd ed. (ISBN: 0-8053-0604-8;$31.95)

Introduces Ada from a software engineering vantage. Addresses the issues of building com-plex systems. Includes new features in this second version: a more thorough introduction to Ada syntax and semantics, an updated section on object-oriented techniques to reflect the cur-rent state of knowledge, and improved ex-amples that illustrate good Ada style for produc-tion systems development.

Booch, Grady. *Software Components With Ada Struc-tures, Tools, and Subsystems*. Benjamin-Cummings, 1987. 635p.(ISBN: 0-8053-0609-9; $35.50/paperback)

Catalogs reusable software components and provides examples of Ada programming style. Presents a study of data structures and algo-rithms using Ada.

Bott, F., editor. *Ada Yearbook, 1991*. Van Nos Reinhold, 1991. (ISBN: 0-442-30836-1; $54.95/Trade)

Bover, D. *Introduction to Ada*. Addison-Wesley, 1991. (ISBN: 0-201-50992-X; $30.25/Trade)

Bryan, D.L. and Mendal, G. *Exploring Ada*. (Volume 1). Prentice-Hall, 1990. 411p.(ISBN: 0-13-295684-5; $34.00/text ed.)

Describes Ada's type model, statements, pack-ages and subprograms. Includes programming features such as information hiding, facilities to model parallel tasks, data abstraction, and soft-ware reuse.

Bryant, R. and B. Unger, editors. *Simulation in Strongly Typed Languages: Ada, Pascal, Simula*. (SCS Simulation Series, Vol. 13, No. 2, Soc Cumputer Sim. (ISBN: 0-317-05019-2; $36.00/trade)

Buhr, R. J. *Practical Visual Techniques in System Design with Applications to Ada*. Prentice-Hall, 1990.

533p.(ISBN:0-13-880808-2; $43.20/Casebound)

Offers a personal statement on how to use visual techniques to organize one's thinking during the design process.

Buhr, R.J. *System Design with Ada*. Prentice-Hall, 1984. 256p.(ISBN: 0-13-880808-2; $48.00 paperback) (ISBN:0-13-881623-9; $55.00/Text ed.)

Stresses aspects of Ada important for design. Aims numerous examples of notations at teaching, learning, CAD, and uses in industrial practice. Contains three divisions: 1) provides a top down overview of the design features of Ada; 2) develops the design notation and pro-vides a tutorial on the design process using simple examples; 3) treats advanced issues such as implementing the X.25 packet switching protocol.

Burns, A. *Concurrent Programming in Ada*. (Ada Com-panion Series). Cambridge University Press, 1985. 241p.(ISBN: 0-521-30033-9; $34.50/Trade)

Reports on Ada tasking offering a detailed de-scription and an assessment of the Ada language concerned with concurrent programming.

Burns, A., and Wellings, A. *Real-Time Systems and Their Programming Languages*. Addison-Wesley, 1990. 575p.(ISBN: 0-201-17529-0)

Provides a study of real-time systems engineer-ing, and describes and evaluates the program-ming languages used in this domain. Considers three programming languages in detail: Ada, Modula-2, and occam2.

Burns, A. *A Review of Ada Tasking*. (Lecture Notes in Computer Science Series, Vol. 262) Springer-Verlad, 1987. (ISBN: 0-387-18008-7; $15.50)

Byrne, W.E. *Software Design Techniques for Large Ada Systems*. Digital Press, 1991. 314p.(ISBN: 1-55558-053-X; $45)

Introduces design strategies for controlling com-plexities inherent in large computer programs and in software systems as groups of large computer programs executing concurrently. Focuses primarily on issues associated with the

design of software systems as a whole rather than on localized design and coding issues.

Caverly, P., and Goldstein, P. *Introduction to Ada: A Top Down Approach for Programmers*. Brooks-Cole,1986. 237p.(ISBN:0-534-05820-5;$18.50/pap. text ed.)

Organizes and emphasizes those features that distinguish Ada from other programming languages. Uses a cyclical approach to the treatment of many topics. Gives a brief history of the development of the Ada language. Introduces the I/O capabilities, procedures, character and numeric data types and subtypes, and the concept of an Ada program library. Discusses enumeration, array, record, and derived types, and demonstrates how the package can be used to encapsulate datatypes. Explains access types and applications and the encapsulation of data objects in packages. Illustrates how finite-state machines can be represented by packages. Describes the essentials of tasking and deals with blocks and exceptions. Introduces the reader to private types, types with discriminates, and generic units.

Cherry, G. W. *Parallel Programming in ANSI Standard Ada*. Prentice-Hall, 1984. 231p.(ISBN: 08359-5434-X; $48.00/text ed.)

Explores parallel sorting, searching, root finding, process pipelining, object (data) flow graphs, exception handling, etc., using Ada.

Cherry, G.W., *Ada Programming in ANSI Standard Ada*. Prentice-Hall, 1981. (out of print)

Chirlian, Paul M. *Introduction to Ada*. Weber Systems, 1985. 291p.(ISBN: 0-916460-42-8; $19.95)

Provides a basic course in the Ada programming language. (Ada courses and/or self-study)

Clark, Robert G. *Programming in Ada: A First Course*. Cambridge University Press, 1985.215p.(ISBN: 0-521-25728-X;$ 47.50/Trade) (ISBN: 0-521-27675-6; $21.95/paperback)

Introduces the Ada programming language. Targets persons without previous experience in programming. Details how to design solutions on a computer. Concentrates on solving simple problems in the early sections: the later sections explore how packages can be used in constructing large reliable programs. Emphasizes central

features such as data types, subprograms, packages, separate compilation, exceptions and files. ANSI/MIL-STD-1815a-1983 is referenced throughout the book.

Cohen, N. C. *Ada as a Second Language*. McGraw-Hill, 1986. 838p.(ISBN: 0-07-011589-3; $36.04/pap. text ed.)

Explains Ada to those who wish to acquire a reading and writing knowledge of the Ada language. Also a programming reference source.

Conn, R (editor). Ada Software Repository (ASR). NYZoetrope, 1990. 35p.(ISBN: 0-918432-78-2; $16.95/paperback)

Describes how to use the Ada Software Repository, which contains Ada programs, software components, and educational materials, and resides on the host computer of the Defense Data Network (DDN).

Dawes, J. et al. (editors). *Selecting an Ada Compilation System*. (Ada Companion Series). Cambridge University Press, 1990. 173p.(ISBN:0-521-40498-3; $39.50/Trade)

Offers answers to key questions and contains background information necessary for making informed decisions on choosing a compiler system.

Dawes, J. *The Professional Programmers Guide to Ada*. Pitman Publishing, 1988. (ISBN: 0-273-02821-9; $100.00x)

Dorchak, S. F. and Rice, P. B. *Writing Readable Ada: A Case Study Approach*. Heath, 1989. 244p.(ISBN: 0-669-12616-0;$17.00)

Contains a style guide, which gives suggestions for enhancing code readability; devotes a chapter to the discussion of concurrency, an advanced feature of modern programming languages; a fully coded Ada program, along with a sample run; a bibliography, which lists books and articles about Ada and software engineering principles; two indexes, one devoted exclusively to references of case study modules and the other listing important topics and concepts.

Elbert, T. F. *Embedded Programming in Ada*. Van Nostrand Reinhold, 1989. 523p.(ISBN: 0-442-22350-1;$55.00/Trade)

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Clarifies Ada for the practicing programmer and for the advanced engineering or computer science student. Assumes the reader has acquired a certain level of sophistication, general concepts normally found in introductory programming texts are not covered. Also, presumes the reader is familiar with operating systems and has a basic knowledge of some block-structured language such as PL/1 and Pascal.

Feldman, M. B. and Koffman, E. B. *Ada Problem Solving & Program Design*. Addison-Wesley, 1991.(ISBN:0-201-5006-3/diskette) (ISBN:0-201-55560/atrade)

Presents Ada to the beginning programmer with emphasis on packages. Contains no dynamic data structures, pointers, or tasking.

Feldman, M. B. *Data Structures with Ada*. Prentice Hall, 1985. 314p.

Highlights the use of Ada as a general purpose programming language. Includes the following : linked lists, queues and stacks, graphs, trees, hash methods, sorting, etc. Does not include generics; it was written before compilers could handle generics. Free software available from the author.

Feuer, A.R. and N. Gehani, *Comparing & Assessing Programming Languages: Ada, C & Pascal*. (Software Series) Prentice-Hall, 1984. (ISBN: 0-13-154840-9; $32.00/paper text edition)

Fisher, D.A., editor. *Ada Language Reference Manual*. Gensoft Corp., 1986. (ISBN: 0-9618252-0-0; $12.95/paper text edition)

Fisher, G., editor. *Approved Ada Language Commentaries*. (Ada Letters Series, Vol 9, No. 3) Assn. Computing Machinery, 1989. (ISBN: 0-89791-311-6; $30.00/paper text edition)

Ford, B., et al. *Scientific Ada*. (Ada Companion Series). Cambridge University Press, 1987. 386p.(ISBN: 0-521-33258-3; $44.50/Trade)

Explores aspects of the Ada programming language that are relevant to the scientific (i.e., numeric) community at large. Concentrates on the numeric models of Ada and a number of Ada-specific features (e.g., generics). Reviews guidelines for the design of large scientific libraries in Ada.

Freedman, Roy S. *Programming Concepts with the Ada Language*. Petrocelli, 1982. 165p.(ISBN: 0-89433-190-6; Out of print)

Assists in understanding the concepts discussed in the Ada Language Reference Manual.

Freedman, R.S. *Programming Concepts with the Ada Reference Manual*. Petrocelli, 1982. (ISBN: 0-89433-190-6; $12.95)

Gautier, R. J. and Wallis, P. J. *Software Reuse with Ada*. Peregrinus Ltd., 1990. 205p.(ISBN: 0-86341-173-8)

Contains three sections: 1) general reuse issues, comprises a collection of papers on various aspects of Ada software reuse; 2) case studies of Ada reuse in practice; and 3) Ada Reuse Guidelines which appear in their final form in this section.

Gehani,N. *Ada: An Advanced Introduction Including Reference Manual for the Ada Programming Language*. Prentice-Hall, 1984. 568p.(Out of print)

Introduces problem solving in Ada by means of a set of examples. Develops solutions to problems in the framework of stepwise refinement. Provides practical instruction in top-down structured programming.

Gehani, N. *Ada: An Advanced Introduction*. (second edition). Prentice-Hall,1989. 280p.(ISBN: 0-13-004334-6 $32.40/paperback)

Introduces advanced problem-solving in Ada. Emphasizes modular programming as good programming practice.

Gehani, N. *Ada: Concurrent Programming*. Prentice-Hall, 1984. 261p.(ISBN: 0-13-004011-8; out of print)

Offers a large collection of concurrent algorithms, expressed in terms of the constructs provided by Ada, as the support for concurrent computation. Explains the concurrent programming facilities in Ada and shows how to use them effectively in writing concurrent programs. Surveys concurrent programming in other languages, and disscusses issues specific to concurrent programming facilities in Ada.

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Gehani, N. *Unix Ada Programming*. Prentice-Hall, 1987. 310p.(ISBN: 0-13-938325-5; $34.00/paperback)

Focuses on the novel aspects of the Ada language and explains them by many examples written out in full. Examines the interesting differences between the Ada language and other programming languages. Also, notes the similarities between Ada, Pascal, C, PL/I, and Fortran.

Gilpin, Geoff. *Ada: A Guided Tour and Tutorial*. Prentice Hall, 1986. 410p.(ISBN: 0-13-73599-0; $21.95/paperback)

Reports on the developments in control structures, scalar data types, multitasking, program structure and access types.

Goldsack, S. J. *Ada for Specification: Possibility and Limitations*. (Ada Companion Series).Cambridge University Press, 1986. 265p. (ISBN: 0-521-30853-4; $7.50/Trade)

Examines the use, role, features and purpose of specification languages, particularly Ada, in a large-scale software project.

Gonzalez, D. *Ada Programmer's Handbook*. Benjamin-Cummings, [Jul] 1991. (ISBN: 0-8053-2529-8; $13.95/paper)

Gonzalez, Dean W. Ada Programmer's Handbook and Language Reference Manual. Benjamin-Cummings, 1991. 200p.(ISBN: 0-8053-2528-X; 19.95/paperback)

Presents information intended for those professionals transitioning to Ada. includes a glossary.

Goos, G.; Wulf, W. A.; Evans, A. and Butler, K. J. *Diana: An Intermediate Language for Ada*. (Lecture Notes in Computer Science). Springer-Verlag, 1987.201p. (ISBN: 0-387-12695-3; $20.00/paperback)

Describes DIANA, a Descriptive Intermediate attributed Notation for Ada, which resulted from a merger of the properties of two earlier similar intermediate forms: TCOL and AIDA.

Habermann, A. and Perry,Dewayne E. *Ada for Experienced Programmers*. (Computer Science Series). Addison- Wesley, 1983. 480p.(ISBN: 0-201-11481-X; $29.25/paperback)

Offers a comparative review of Ada and Pascal, using dual program examples to illustrate software engineering techniques.

Habermann, A.N., editor. *System Development & Ada*. (Lecture Notes in Computer Science, Vol. 275) Springer-Verlag, 1987. (ISBN: 0-387-18341-8; $25.70/paper)

Heilbrunner, Stephan. *Ada in Industry, Proceedings of the Ada-Europe International Conference*, Munich, June 7-9, 1988.(Ada Companion Series). Cambridge University Press, 1988. 262p.(ISBN:0-521-36347-0; $42.50/Trade)

Provides state of the art reports on the Ada programming language.

Hibbard, Peter et al. *Studies in Ada Style*. (Second Edition) Springer-Verlag, 1983. 101p.(ISBN: 0-387-90816-1; $21.50/paperback)

Presents concepts of the abstractions embodied in Ada with five examples: a queue, a graph structure, a console driver, a table handler and a solu- tion to Laplace's equation using multiple tasks.

Ichbiah, J, et al. *Rationale for the Design of the Ada Programming Language*. Cambridge University Press, 1990. (0-521-39267-5; contact publisher for information)

Johnson, P.I. *The Ada Primer*. McGraw, New York, NY, 1985. (out of print)

Johnson, Phillip I. *Ada Applications and Administration*. (Second Edition). McGraw-Hill. 1990. 209p.(ISBN: 0-07-032627-4ISBN; $39.95/Text edition)

Explains how to ensure the reliable, error-free, cost-effective operation of large computer systems with Ada. Updates and revises earlier edition (first entitled The Ada Primer).

Jones, Do-While. *Ada in Action with Practical Programming Examples*. Wiley, 1989. (ISBN: 0-471-60708-8; $34.95/paper text edition)

Jones, Do-While. *Ada in Action with Practical Programming Examples*. John Wiley & Sons, 1989. 487p.(ISBN: 0-471-50747-4; $57.95/Text edition)

Helps Ada programmers avoid common pitfalls and provides them with many reusable Ada routines. Discusses a variety of numeric considerations, user interfaces, utility routines, and software engineering and testing. Provides examples of Ada code.

Katzan, H., Jr. *Invitation to Ada* (Condensed Edition). Petrocelli, 1984. 173p.(Out of print)

Introduces Ada in terms of three broad classes of applications: numerical, system programming, and real-time programming.

Katzan, H., Jr. *Invitation to Ada*. Petrocelli, 1984. (ISBN: 0-89433-239-2; $14.95/paper text edition)

Katzan, H. Jr. *Invitation to Ada & the Ada Reference Manual*. Petrocelli, 1982. 429p.(ISBN: 0-89433-132-9;$34.95/Text edition)

Calls for the scientific computing community to adopt the Ada programming language. Part II is the Ada Reference Manual, 1980 version.

Keeffe, D., et al. *Pulse: An Ada-based Distributed Operating System*. (APIC Studies in Data Processing, Vol. 26), Acad Press, 1985. (ISBN: 0-12-402979-1; $39.95/paper)

Keller, J. *The Ada Challenge, 1988: Strategies Risk & Payoffs*. Pasha Publications, 1988. (ISBN: 0-935453-22-9; $174.00/Paper)

Krieg-Brueckner, B., et al. editors. *Anna: A Language for Annotating Ada Programs*. (Lecture Notes in Computer Science Series, Vol. 260) Springer-Verlag, 1987. (ISBN: 0-387-17980-1; $15.50/Paper)

Ledgard, Henry. *Ada: A First Introduction*. (Second Edition) Springer-Verlag, 1983. 130p.(ISBN: 0-540-90814-5)

Assumes that the reader has experience with some other higher order programming language. Outlines several key features of Ada; a treatment of the facilities - concept of data types, the basic statements in the language, subprograms, packages, and general program structure.

Ledgard, H. *Ada: An Introduction*. 2nd edition, Springer-Verlag, 1987. (ISBN: 0-387-90814-5; $22.00/paper text edition)

Lewi, P. and J. Paredaens. *Data Structures of Pascal, Algol Sixty-Eight, PL-1 & Ada*. (ISBN: 0-387-15121-4; $49.00/Paper)

Lomuto, N. *Problem Solving Methods with Examples in Ada*. Prentice HallPG, 1987. 176p.(Out of print)

Contains a collection of hints on solving programming problems. Includes examples along with sections on the art of thinking, analyzing the problem, systematic development, looking back, ideas for ideas, and case studies.

Luckham, David C. et al. *Programming with Specifications: An Introduction to Anna, a Language for Specifying Ada Programs*. (Texts and Monographs in Computer Science). Springer-Verlag, 1990. 416p.(ISBN: 0-387-97254-4)

Offers an indepth look at ANNA, a form of the Ada language in which special-ly marked comments act as formal annotations about the program to which they are attached.

Lynch, B., editor. *Ada: Experiences & Prospects: Proceedings of the Ada-Europe International Conference*. Dublin, 1990. (Ada Companion Series) (ISBN: 0-521-39522-4; $9.50/Trade)

Lyons, T.G. *Selecting an Ada Environment.(Ada Companion Series)*. Cambridge University Press, 1986. 239p.(ISBN: 0-521-32594-3 (British);$29.95/Trade)

Provides an overview of the Ada Programming Support Environment (APSE). Covers six main issues in selecting an environment. Contains summaries of current approaches to likely problems, indications of deficiencies in existing knowledge, and chechlists of questions to ask when considering a particular environment.

Mayoh, B. *Problem Solving with Ada*. Bks Demand UMI, (Wiley Series in Computing), Repr. of 1982 edition (order no. 2032658; $63.20/paper)

McDermid, J.A. and K. Ripken. *Life Cycle Support in the Ada Environment*. (Ada Companion Series) Cambridge University Press, 1984. (out of print)

McGettrick, Andrew D. *Program Verification Using Ada*. Cambridge University Press, 1982. 345p.(ISBN: 0-521-24215-0; $57.50/Trade) (ISBN: 0-521-28531-3; $29.95/paperback)

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Discusses such topics as correctness of nonbranching programs, invariants and termination proofs via well formed sets, elementary types, arrays, records, access types, packages as well as an encapsulation mechanism for abstract data types, and parallelism.

Miller, N.E. *File Structures: With Ada.* Benjamin-Cummings, 1989. (ISBN0-8053-0440-1; $39.95/ Text edition)

Mohnkern, Gerald L. and Mohnkern, Beverly. *Applied Ada.* TAB Books, 1986. 326p.(ISBN: 0-8306-2736-7)

Introduces the Ada language on a practical level. Targets persons who understand the basic terminology and concepts of programming (a particular language is not a prerequisite). Instructs through examples of programs written in Ada.

Musser, D. R. and Stepanov, A. A. *The Ada Generic Library Linear List Processing Packages.* Springer-Verlag, 1989. 265p.(ISBN: 0-387-97133-5: $39.00/Trade)

Discloses the purpose of the Ada Generic Library as an attempt to provide Ada Programmers with an extensive, well-documented library of generic packages whose use can substantially increase productivity and reliability. Contains eight Ada packages, with over 170 subprograms, for various linear data structures based on linked lists.

Naiditch, David. *Rendezvous with Ada: A Programmer's Introduction.* John Wiley & Sons, 1989. 477p.(ISBN: 0-471-61654-0; $39,95/paperback)

Explains Ada to the beginning programmer (knowledge of at least one high level programming language is advised). Concludes each chapter with exercises.

Nielsen, Kjell and Shumate, K. *Designing Large Realtime Systems with Ada.* McGraw-Hill, 1988. 464p.(ISBN: 0-07-046536-3; $58.95/Text)

Presents a comprehensive methodology for the design and implementation of large realtime systems in Ada. (The reader is expected to have a basic understanding of the Ada programming language.)

Nielsen, Kjell. *Ada in Distributed Realtime Systems.* McGraw-Hill, 1990c. 371p.(ISBN: 0-07-046544-4; $58.95/Text)

Emphasizes design paradigms and heuristics for the practicing software engineer. Provides important background material for the builder of operating systems and runtime support environments for distributed systems. Contains data on distributed systems, process abstraction and Ada for distributed realtime systems, design paradigms for distributed systems, inter-processor communication, virtual and physical nodes, and fault tolerance.

Nissen, John and Wallis, Peter. *Portability and Style in Ada.* (Ada Companion Series). Cambridge University Press, 1984. 202p. (Out of print)

Examines style and portability guidelines for Ada programmers. Results of work by the Ada-Europe Portability Working Group.

Nyberg, K.A., *Ada: Sources & Resources.* Grebyn Corp., 1990, P.O. Box 497, Vienna, VA Tele: (703) 281-2194; $60.00.

Olsen, E. W. and Whitehill, S. B. *Ada for Programmers.* Prentice-Hall, 1983. 310p.(ISBN: 0-8359-0149-1; $38.00)

Includes many of the subtleties of Ada in a self-paced tutorial format. Contains the following: conceptual overview; predefined types; expressions; basic Ada statements; subprograms; packages; etc.

Petersen, Charles and Miller, Nancy E. *File Structures with Ada.* Benjamin- Cummings, 1990. 200p.(ISBN: 0-8053-0440-1)

Studies the various file structures needed when implementing different file organizations. Discusses ISAM and B-tree organization.

Pokrass, D. and G. Bray. *Understanding Ada: A Software Engineering Approach.* Wiley, 1985. (ISBN: 0-471-87833-2; $32.95/paper text edition)

Price, David. *Introduction to Ada.* Prentice Hall, 1984. 150p.(ISBN:0-13-477646-1;$26.95/Trade)

Presents examples, programs, and program fragments showing Ada's power as a general purpose language, plus step-by-step explanations

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demonstrating how Ada simplifies the production of large programs. Requires little technical or mathematical sophistication.

Pyle, I. C. *The Ada Programming Language*. Prentice HallPG, 1985. 345p.(ISBN 0-13-003906-3)

Describes the basic features of the Ada programming language. Covers the issues of program structure, and discusses machine specific issues. Assumes prior knowledge of programming. Introduces topics in the context of embedded systems. Covers the following areas: the basic features of Ada; the particular programming concepts in Ada that will probaly be new to most programmers; the issues of program structure; the machine- specific issues that can be expressed in a machine-independent language and advanced treatment.

Pyle, I. *Developing Safety Critical Systems with Ada*. Prentice-Hall, 1991. (ISBN: 0-13-204298-3; $39.00/paper)

Rogers, M.W. *Ada: Language, Compilers and Bibliography*. Cambridge University Press, 1984. 332p.(ISBN: 0-521-26464-2; $24.95/Trade)

Offers a photo reprint of the Ada standard, a guide listing the characteristics of an implementation that should be taken into account in the specification or selection of an Ada compiler and a bibliography.

Saib, S. and R.E. Fritz. *Introduction to Programming in Ada*. HR&W, 1985. (ISBN: 0-03-059487-1; $28.95/Text edition)

Saib, Sabina H. and Fritz, Robert E. *Tutorial: The Ada Programming Language*. IEEE Computer Society, 1983. 538p.(ISBN: 0-8053-7070-6; $25.56/ paperback)

Covers such topics as the history and current status of Ada; basic language; schedule for industry and DoD; preventing error; readable, maintainable, modular systems; real-time features, portability; and environments for Ada.

Savitch, T.J., editor. *Ada: Art & Science of Computing*. Benjamin-Cummings, [Jan 1992] (ISBN: 0-8053-7070-6; $25.56/paper text edition)

Saxon, J.A. and R.E. Fritz. *Beginning Programming with Ada*. Prentice-Hall, 1983. (out of print)

Shimer, R. *Ada*. Amigo Projects, 1989. (ISBN: 0-685-30433-7; $12.00/paper text edition)

Shumate, K. *Understanding Concurrency in Ada*. Mcgraw-Hill, 1987, 595p.(ISBN: 0-07-057299-2ISBN; $58.95/Text)

Presents a detailed exposition of concurrency in Ada. Looks at five case studies and gives an advanced introduction to real-time programming.

Shumate, K. *Understanding Ada*. HarperCollins, 1974. (out of print)

Shumate, K.C. *Understanding Ada: With Abstract Data Types*. 2nd edition Wiley, 1989. (ISBN: 0-471-60347-3; $21.50/Text edition)

Skansholm, J. *Ada from the Beginning*. Addison-Wesley, 1988. 617p.(ISBN: 0-201-17522-3; $29.25)

Describes the principles and concepts of programming in a logical and easy-to-understand sequence and discusses the important features of Ada (except parallel programming). Teaches the basics of writing computer programs. Emphasizes the *fundamentals* of good programming. Provides a grounding in the programming language Ada. Covers the following: programming designs, the basics of Ada, control statements, types, subprograms, data structures, packages, input/output, exceptions, dynamic data structures, files, and generic units.

Smedema, C.H., et al. *The Programming Languages Pascal, Modula, CHILL, Ada*. Prentice-Hall, 1983. 154p.(ISBN: 0-685-08596-1; $16.95/ Trade)

Provides an informal introduction to the most important characteristics of Pascal, Modula, CHILL, and Ada. Discusses languages in historical order. Includes the history, application area, standardization aspects and future prospects of each.

Sodhi, J. *Computer Systems Techniques: Development, Implementation, and Software Maintenance*. TPR, a division of McGraw (800-822-8138).

Sodhi, Jag. *Managing Ada Projects Using Software Engineering*. TAB, 1990. 246p.(ISBN: 0-8306-0290-9; $34.95/Trade)

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Describes some of the practical aspects of developing a flawless project in Ada.

Sodhi, J. *Software Engineering: Methods, Management, and CASE Tools*. TPR, A division of McGraw. Tele: (800) 822-8138.

Software Productivity Consortium. *Ada Quality and Style: Guidelines for Professional Programmers*. Van Nostrand Rheinhold, 1989, 230p.(ISBN: 0-442-23805-3; $26.95/paperback)

Provides a set of specific guidelines for using the powerful features of Ada in a disciplined manner. Consists of concise statements of the principles that should be followed, and the rationale for each guideline.

Sommerville, I. and R. Morrison. *Developing Large Software Systems with Ada*. (International Computer Science Series) Addison-Wesley, 1987. (ISBN: 0-201-14227-9; $26.95/paper text edition)

Stein, Dorothy. *Ada: A Life and Legacy*. MIT Press, 1985. 321p.(ISBN: 0-262-19242-X; $30.00/Trade) (ISBN: 0-262-69116-7; $10.95)

Presents the view that Ada Byron's mathematical and scientific achievements have been exaggerated.

Stratford-Collins, M.J. *Ada: A Programmer's Conversion Course*. (Ellis Horwood Series in Computers & Their Applications) Wiley, 1982. (ISBN: 0-470-27332-1; $56.95/Trade)

Tafvelin, Sven (editor). *Ada Components: Libraries and Tools*. (Ada Companion Series) Cambridge University Press, 1987. 288p.(ISBN: 0-521-34636-3; $44.50/Trade)

Comprises the proceedings of the international conference organized by Ada Europe with the support of the Commission of the European Communities and and the collaboration of SIG Ada.

Tedd, M., et al. *Ada for Multi-microprocessors*. (Ada Companion Series). Cambridge University Press, 1984. 208p.(ISBN: 0-521-301033; $$4450/Trade)

Addresses those problems of distributed systems that arise out of the nature of Ada and support environments. Discusses the issues of

how to construct and run an Ada program for a valuable target configuration of several microcomputers, interconnected through shared memories, multi-access busses, local area networks, and end-to-end lines.

Texel, P. *Introduction to Ada. Packages for Programmers*. Wadsworth Press, 1986, 441p.(ISBN: 0-534-06348-9/Out of print)

Provides a guide to Ada that contains complete packages, I/O facilities and sample programs, emphasizing top-down design throughout.

Toole, Betty A., Ed.D. *Ada, The Enchantress of Numbers: A Selection from the Letters of Lord Byron's Daughter and Her Description of the First Computer*. Strawberry Press (ISBN: 0-912647-09-4; 29.95. Purchase from Computer Literacy Bookshops: 408/435-1118)

Ada's descritpion of the first computer is annotated and related to the modern software language, Ada, with the help of Colonel Richard Gross, USAF.

Tremblay, J. et al. *Programming in Ada*. McGraw-Hill, 1990. PG 489p.(ISBN: 0-07-065180-9; $24.60/paper text)

Explains computer science concepts in an algorithmic framework, with a strong emphasis on problem solving and solution development.

Uhl, J. *An Attribute Grammar for the Semantic Analysis of Ada*. (Lecture Notes in Computer Science Series, Vol. 139) Springer-Verlag, 1982 (out of print)

Unger. *Simulation Software & Ada*. Society Computer Sim., 1984. (ISBN: 0-911801-03-0; $16.00/paper)

Vasilescu,E. N. *Ada Programming with Applications*. Allyn and Bacon, 1987. 539p.(Out of print)

Offers a bottom-up approach to commercial and business uses of Ada, emphasizing the features of Ada that are most like those of traditional languages.

Vasilescu. *Ada Programming*. Allyn, 1986. (out of print)

Volper, D. and Katz, M. D. *Introduction to Programming Using Ada*. Prentice-Hall, 1990. 650p.(ISBN: 0-13-493529-2; $30.00)

Uses the spiral approach as the presentation methodology in this introductory course in Ada programming.

Wallace, Robert H. *Practitioner's Guide to Ada*. McGraw-Hill, 1986. 373p.(ISBN: 0-07-067922-3; $39.95)

Discusses the issues to be considered when making the transition to Ada, on selecting toolsets, and on using the language effectively. Covers the following: Ada as a language; Ada Oriented Development Environments; Ada oriented design methodologies; Ada policies and standards; Ada products and vendors; sources of Ada-related information; making the transition to Ada and other uses of Ada.

Wallach, Y. *Parallel Processing & Ada*. Prentice-Hall, 1990. (ISBN: 0-13-650789-1; $54.00/casebound)

Wallis, P.J. *Ada: Managing the Transition*. (Ada Companion Series) Cambridge University Press, 1986. (ISBN: 0-521-33091-2; $44.50/Trade)

Wallis, P.J., editor. *Ada Software Tools Interfaces*. (Lecture Notes in Computer Science Series, Vol. 180) (ISBN: 0-387-13878-1; $16.00/paper)

Watt,D.A. et al. *Ada Langugage and Methodology*. Prentice-Hall, 1987. 515p.(ISBN: 0-13-004078-9; $37.00/paperback)

Covers the Ada language in detail and introduces program methodologies appropriate for use with Ada. Discusses the following topics: 1) covers a subset of Ada broadly comparable with most other programming languages; 2) introduces the features of Ada that make it suitable

for the construction of large programs; 3) completes the treatment of the data types of Ada; 4) concludes the treatment of program structures.

Wegner, P. *Programming with Ada: An Introduction by Means of Graduated Examples*. Prentice-Hall, 1980. (out of print)

Wiener, Richard and Sicovec, Richard. *Programming in Ada*. John Wiley & Sons, 1983. 345p.(Out of print May 1991)

Describes the major features of the Ada programming language covering basic control and data structures associated with Ada, and powerful advanced features that differentiate it from previous programming languages.

Wiener, R.S. and R.F. Sincovec. *Software Engineering with Modula-2 & Ada*. Wiley, 1984. (ISBN: 0-471-89014-6; $51.95/Text edition)

Wiener, R. and R. Sincovec. *Programming in Ada*. Wiley, 1983 (out of print May 1991)

Winters, John. *Power Programming With Ada for the IBM PC*. TAB Books, 1987. 207p.(ISBN: 0-8306-2902-5; $16.95paperback)(ISBN 0-8306-7902-2DP 1987; $24.95/Trade)

Analyses programs in Ada for personal computers. Written for the beginning Ada programmer in a style very easy to read and follow.

Young, S. J. *An Introduction to Ada*. John Wiley and Sons, 1983. 400p.(Out of print)

Introduces the programming language and explains the underlying program design methodology, illustrated with examples.

ALPHABETICAL LIST (BY TITLE)

Ada: Introduction to Programming. Sams, 1986. (ISBN: 0-672-22523-9; $32.95/Trade)

Ada Military & Commercial Markets. Int. Res. Deve. 1986. (ISBN: 0-88694-719-7; $1815.00x)

Ada Quality & Style: Guidelines for Progessional Programmers. Van Nos Reinhold, 1989. (ISBN: 0-442-23805-3; $26.95/paper)

Ada Reference Manual, The. Silicon Pr., 1988. (ISBN: 0-9615336-6-8; $24.95/Trade)Algo Publishing Staff.

Ada Statement-to-Statement Dictionary. Algo, 1988. (ISBN: 0-945473-62-1; $14.95/paper)

Common Mistakes in Ada Program Conversions. Algo, 1988. (Out of print 12-89)

Executive Briefing on Ada. 1990, Alsys, Inc., 67 South Bedford Street, Burlington, MA 01803-5152, (617) 270-0030 (free booklet)

Intermediate Transfer Methods for Simulating GOTOs by IF & Loop Statements in Ada. Algo, 1988. (ISBN: 0-945473-54-0; $14.95/paper)

Introduction to Ada, Merl Miller Assoc., (ISBN: 0-317-26567-9; $19.95/trade)

Programming Language Ada, The: A Reference Manual. Proposed Standard Document U.S. Department of Defense. (Lecture Notes in Computer Sciences Series, Vol. 106) Springer-Verlag, 1983. (ISBN: 0-387-10693-6; $19.00/paper)

Rationale for the Design of the ADA Programming Language. Silicon Pr., 1989. (ISBN: 0-9615336-5-X; $30.95/paper)

Reference Manaual for the Ada Programming Language. Springer-Verlag, 1987. (ISBN: 0-387-90887-0; $19.50/paper)

Reference Manual for the Ada Programming Language: Reprint of the Draft of the Proposed American National Standards Institute (ANSI). Association Computing Machinery, 1982. (ISBN: 0-89791-084-2; $28.00/paper text edition)

Resources in Ada. New York: ACM, 1990. (ISBN: 0-89791-374-4; $44.95x/paper text edition)

Simulation in Ada (ESC '85). Society Computer Sim. (ISBN: 0-317-60956-4; $12.00/Trade)

PUBLISHERS

Addison-Wesley Publishing Co. (Subsidiary: Benjamin-Cummings), Rte 128, Reading, MA, 01867, 1-800/447-2226.

Cambridge University Press, 40 W. 20th St. New York, NY, 10011, 1-800/221-4512.

IEEE Computer Society Press, 10662 Los Vaqueros Circle, Los Alamitos, CA 90720, 1-800/272-6657.

McGraw-Hill, Inc., 11 W. 19th St., New York, NY 10011 1-800/842-3075 or 1-800/338-3987.

Prentice-Hall, Prentice-Hall Bldg, Sylvan Ave., Englewood Cliffs, NJ 07632, 201/767-5937.

Silicon Preess, 25 Beverly Rd., Summit, NJ 07901, 908/273-8919.

Springer-Verlag, 815 De La Vina, Santa Barbara, CA 93101, 1-800/SPRINGER or 212/460-1500.

Tab Books (Division of McGraw-Hill), 113311 Monterey Ave, Blue Ridge Summit, PA 17214, 1-800/233-1128, or 717-794-2191.

Van Nostrand Reinhold, 115 Fifth Ave, New York, NY, 10003, 1-800/926-2665.

John Wiley & Sons, Inc., 605 Third Ave., New York, NY, 10158, 1-800/526-5368 or 201/469-4400.

September 15, 1991

Dear Educator:

If your institution currently offers courses in the Ada programming language, we would like to list information about those courses in our Catalog of Resources for Education in Ada and Software Engineering (CREASE), Version 6.0, and on our on-line database of Ada Education Resources. There is no charge for your institution to be listed in our catalog or in our database.

If your institution does not currently offer a course in Ada, but might be interested if you were provided with a **free Ada compiler**, we would like to hear from you. Our sponsoring agency, the Ada Joint Program Office, is investigating the possibility of providing free Ada compilers to educational institutions.

To be included in the CREASE and to be on the list of parties interested in receiving a free Ada compiler, all you need to do is complete the attached survey and return it to the Ada Information Clearinghouse at the address given below no later than October 15, 1991.

> Ada Information Clearinghouse
> ATTN: CREASE
> c/o IIT Research Institute
> 4600 Forbes Boulevard
> Lanham, Maryland 20706

If you have any questions, or need additional information, please call the AdaIC at 1-800-AdaIC-11 or 703/685-1477

Sincerely,

Susan Carlson
AdaIC Project Manager

Ada EDUCATION QUESTIONNAIRE

I. Current Ada Offerings

1. How many Ada courses does your institution offer?

   ___ 0   ___ 3
   ___ 1   ___ 4
   ___ 2   ___ 5 or more

2. What is the primary undergraduate programming language?

   ___ Ada   ___ FORTRAN
   ___ BASIC   ___ Pascal
   ___ C   Other _____
   ___ COBOL

3. Which of the following languages are degree requirements for *undergraduate Computer Science* majors?

   ___ Ada   ___ FORTRAN
   ___ BASIC   ___ Pascal
   ___ C   Other _____
   ___ COBOL

4. Which of the following languages are degree requirements for *undergraduate Engineering* majors?

   ___ Ada   ___ FORTRAN
   ___ BASIC   ___ Pascal
   ___ C   Other _____
   ___ COBOL

5. What is the primary graduate programming language?

   ___ Ada   ___ FORTRAN
   ___ BASIC   ___ Pascal
   ___ C   Other _____
   ___ COBOL

6. Which of the following languages are degree requirements for *Master of Science in Computer Science* candidates?

   ___ Ada   ___ FORTRAN
   ___ BASIC   ___ Pascal
   ___ C   Other _____
   ___ COBOL

7. Is Ada used in any courses other than an Ada programming/syntax course?

   ___ YES   If yes, give name(s) of the course(s)
   _____
   _____

   ___ NO

8. Is an Ada course a degree requirement for any other degree?

   ___ YES   If yes, give name(s) of the degree(s).
   _____
   _____

Thank you for taking the time to complete this questionnaire. To ensure that institution is included in the Catalog of Resources for Education in Ada and Software Engineering, please return your completed survey no later than October 15, 1991 to:

<div align="center">

Ada Information Clearinghouse
c/o IIT Research Institute
4600 Forbes Boulevard
Lanham, MD 20706

</div>

If you have any questions, feel free to call the AdaIC at 800/AdaIC-11 or 703/685-1477.

Ada EDUCATION QUESTIONNAIRE

II. Potential for Teaching Ada

9. Would your institution teach Ada if you received an Ada compiler free of charge?

___ . YES

___ NO

10. What hardware would you prefer to use for the Ada compiler?

Computer	Make and Model
PC	
Minicomputer	
Mainframe	

11. Who should be contacted regarding receiving free compilers?

Name _____

Address _____

_____

_____

City _____ State ___ ZIPcode ___

Phone _____

Fax _____

E-mail _____

12. Would you use computer-aided instruction for teaching Ada if it were provided free of charge?

___ YES

___ NO

13. What hardware would you use for the computer-aided instruction program?

Computer	Make and Model
PC	
Minicomputer	
Mainframe	

14. What other training requirements do you have?

_____

_____

_____

_____

_____

III. General Information

15. Point of contact

Name _____

Address _____

_____

_____

City _____ State ___ ZIPcode ___

Phone _____

Fax _____

E-mail _____

16. Which category best describes your institution?

___ 4-year college

___ 2-year college

___ technical institute

Other _____

Ada EDUCATION QUESTIONNAIRE

IV. *Information about Ada courses currently being offered.*

Please complete one copy of this page for each Ada course your institution offers.
Feel free to make duplicate copies of this form.

To be included in CREASE Version 6.0, your survey must be returned by October 15, 1991, to the Ada Information Clearinghouse, c/o IIT Research Institute, 4600 Forbes Boulevard, Lanham, MD 20706. Questions can be addressed to the AdaIC staff at 1-800/AdaIC-11.

Title of Course _____
_____

What is the objective of the course (25 words or less)?
_____
_____
_____
_____
_____

What concepts are covered in the course?
___ abstract data types   ___ packages
___ design concepts   ___ problem solving
___ exception handling   ___ real-time
___ generics   programming
___ management   ___ s o f t w a r e
     overview   engineering
___ object-oriented   ___ strong typing
     design
___ tasking

What is the intended   ___ computer
     audience for the   scientists
     course?   ___ engineers
___ analysts   ___ managers
                            other_____

What prerequisites must be met before enrolling in the course?
___ successfully completed any other programming
     course
___ successfully completed another high-order
     programming course

other_____

What text books are used in the course? (Please indicate title, author, publisher, and date of publication.)

Required Texts: _____
_____
_____

Optional Texts: _____
_____
_____

What Ada compilers are provided by the institution for use by students?
_____
_____

What computers are provided by the institution for use by students?
_____
_____

What other Ada tools are provided by the institution for use by student?
_____
_____
_____
_____

How often does the course meet?

___ days
___ weeks
___ hours

How many credit hours are awarded for completion of the course?
___

Name of instructor(s) who teach the course
_____
_____
_____

Point of contact

Name   _____
Address   _____
              _____
              _____
City   State   ZIPcode

Phone   _____
Fax   _____
E-mail _____

E N D